

ROSHKA HEYMAN



ORIGINAL

32D

ROSHKA HEYM
ATTORNEYS AT LAW
TWO ARIZONA CENTER
400 NORTH 5TH STREET
SUITE 1000
PHOENIX, ARIZONA 85004-3906
TELEPHONE NO 602-256-6100
FACSIMILE 602-256-6800

Arizona Corporation Commission
REDOCKETED
AZ CORP COMMISSION
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August 9, 2000

HAND-DELIVERED

Mr. Jerry L. Rudibaugh
Chief Hearing Officer
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007-2669

Re: Docket No. T-01051B-99-0105

Dear Mr. Rudibaugh:

Enclosed is the original unredacted Direct Testimony of Michael J. Ileo, Ph.D. The direct testimony contains some information which is confidential under the terms of the Protective Agreement executed by the parties. Thus, in accordance with the Protective Agreement, the Arizona Payphone Association is filing this unredacted direct testimony under seal.

In addition, the APA is filing an original and ten copies of the redacted Direct Testimony of Michael J. Ileo, Ph.D. with Docket Control. Counsel for US West/Qwest will receive both a redacted and unredacted copy of the direct testimony. All other parties will only receive a redacted copy of the direct testimony.

Sincerely,

Raymond S. Heyman
For the Firm

/ml

cc: Docket Control
Parties of Record

apa/ltrs/rudibaugh01

ORIGINAL

BEFORE THE ARIZONA CORPORATION COMMISSION

AZ CORP COMMISSION

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CARL J. KUNASEK

Chairman

JIM IRVIN

Commissioner

WILLIAM A. MUNDELL

Commissioner

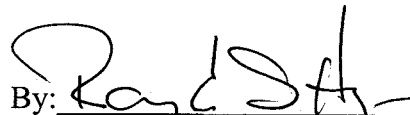
IN THE MATTER OF THE APPLICATION OF US) DOCKET NO. T-01051B-99-0105
WEST COMMUNICATIONS, INC., A)
COLORADO CORPORATION, FOR A HEARING) ARIZONA PAYPHONE
TO DETERMINE THE EARNINGS OF THE) ASSOCIATION'S NOTICE OF
COMPANY, THE FAIR VALUE OF THE) FILING DIRECT TESTIMONY
COMPANY FOR RATEMAKING PURPOSES, TO)
FIX A JUST AND REASONABLE RATE OF)
RETURN THEREON AND TO APPROVE RATE)
SCHEDULES)

The Arizona Payphone Association ("APA"), through undersigned counsel, hereby provides notice that on this day it has filed the Direct Testimony of Michael J. Ileo, Ph.D. in the docket captioned above.

The direct testimony of Dr. Ileo has been redacted to exclude data deemed "confidential" by US West/Qwest.

RESPECTFULLY SUBMITTED this 9th day of August, 2000.

ROSHKA HEYMAN & DEWULF, PLC

By: 

Raymond S. Heyman
Randall H. Warner
Two Arizona Center
400 North 5th Street, Suite 1000
Phoenix, Arizona 85004

Attorneys for Arizona Payphone Association

1 **Original of the foregoing filed**
2 **this 9th day of August, 2000, with:**

3 Docket Control
4 Arizona Corporation Commission
5 1200 W. Washington Street
6 Phoenix, AZ 85007-2669

7 **Copy of the foregoing hand-delivered**
8 **this 9th day of August, 2000, to:**

9 Jerry L. Rudibaugh, Chief Hearing Officer
10 Arizona Corporation Commission
11 1200 W. Washington Street
12 Phoenix, AZ 85007-2669

13 Lyn Farmer
14 Legal Division
15 Arizona Corporation Commission
16 1200 W. Washington Street
17 Phoenix, AZ 85007-2669

18 Deborah Scott, Director
19 Utilities Division
20 Arizona Corporation Commission
21 1200 W. Washington Street
22 Phoenix, AZ 85007-2669

23 **Copy of the foregoing mailed**
24 **this 9th day of August, 2000, to:**

15 Craig Marks, Esq.
16 Citizens Utilities Company
17 2901 N. Central Avenue,
18 Suite 1660
19 Phoenix, AZ 85012

20 Timothy Berg, Esq.
21 Fennemore Craig, P.C.
22 3003 N. Central Avenue,
23 Suite 2600
24 Phoenix, AZ 85012-2913

21 Steven J. Duffy, Esq.
22 Ridge & Isaacson, P.C.
23 3101 N. Central Avenue,
24 Suite 432
Phoenix, AZ 85012

Darren S. Weingard, Esq.
Natalie D. Wales, Esq.
Sprint Communications Company, L.P.
1850 Gateway Drive, 7th Floor
San Mateo, CA 94404-2467

Thomas F. Dixon
MCI WorldCom, Inc.
707 17th Street,
Suite 3900
Denver, CO 80202

Richard Lee
Snively, King & Majoros
O'Connor & Lee, Inc.
1220 L Street, N.W.,
Suite 410
Washington, D.C. 20005

- 1 Jim Scheltema
Blumenfeld & Cohen
2 1625 Massachusetts Avenue, N.W.,
Suite 300
3 Washington, D.C. 20036
4 Albert Sterman
Arizona Consumers Council
2849 E. 8th Street
5 Tucson, AZ 85716
6 Martin A. Aronson, Esq.
William D. Cleaveland, Esq.
7 Morrill & Aronson, P.L.C.
One E. Camelback Road,
8 Suite 340
Phoenix, AZ 85012-1648
9 J.E. & B.V. McGillivray
300 S. McCormick
10 Prescott, AZ 86303
11 Scott S. Wakefield, Esq.
RUCO
12 2828 N. Central Avenue,
Suite 1200
13 Phoenix, AZ 85004-1022
14 Peter Q. Nyce, Esq.
Regulatory Law Office
U.S. Army Legal Services Agency
15 Dept. of the Army
901 N. Stuart Street,
16 Suite 700
Arlington, VA 22203-1837
17 Douglas Hsiao
Rhythm Links, Inc.
18 6933 Revere Parkway
Englewood, CO 80112
19 Diane Bacon, Legislative Director
Communications Workers of America
20 District 7 AFL-CIO, CLC
21 5818 N. 7th Street,
Suite 206
22 Phoenix, AZ 85014-5811
23 Jeffrey W. Crockett, Esq.
Snell & Wilmer, LLP
24

400 E. Van Buren Street, 19th Floor
Phoenix, AZ 85004-0001

Thomas H. Campbell, Esq.
Lewis and Roca
40 N. Central Avenue
Phoenix, AZ 85004-4429

Chuck Turner, Mayor
Town of Gila Bend
P.O. Box A
Gila Bend, AZ 85337-0019

Richard S. Wolters, Esq.
AT&T Communications of the Mountain State,
Inc.
1875 Lawrence Street
Room 1575, 15th Floor
Denver, CO 80202

Patricia L. vanMidde
Assistant Vice President
AT&T
111 W. Monroe Street,
Suite 1201
Phoenix, AZ 85003

Joan S. Burke, Esq.
Osborn Maledon, P.A.
2929 N. Central Avenue
Suite 2100
Phoenix, AZ 85012

Mark N. Rogers
Excell Agent Services, L.L.C.
2175 W. 14th Street
Tempe, AZ 85281

Jon Poston
6733 E. Dale Lane
Cave Creek, AZ 85331

Michael W. Patten, Esq.
Brown & Bain, P.A.
2901 N. Central Avenue,
Suite 2000
Phoenix, AZ 85001-0400

M. Lauer
apa/pl/99-0105notice of filing01

**BEFORE THE
ARIZONA CORPORATION COMMISSION**

**IN THE MATTER OF THE APPLICATION OF US
WEST COMMUNICATIONS, INC., A COLORADO
CORPORATION, FOR A HEARING TO
DETERMINE THE EARNINGS OF THE
COMPANY, THE FAIR VALUE OF THE
COMPANY FOR RATEMAKING PURPOSES, TO
FIX A JUST AND REASONABLE RATE OF
RETURN THEREON AND TO APPROVE RATE
SCHEDULES**

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)
) **DOCKET NO.**
) **T-01051B-99-0105**
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**PREPARED DIRECT TESTIMONY AND EXHIBITS OF
MICHAEL J. ILEO, PH.D.
PRESIDENT/CHIEF ECONOMIST
TECHNICAL ASSOCIATES, INC.**

NON-CONFIDENTIAL VERSION

**ON BEHALF OF THE
ARIZONA PAYPHONE ASSOCIATION**

AUGUST 9, 2000

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**BEFORE THE
ARIZONA CORPORATION COMMISSION
DOCKET NO. T-01051B-99-0105**

**PREPARED DIRECT TESTIMONY AND EXHIBITS OF
MICHAEL J. ILEO, PH.D.**

1 **1.0 Experience and Qualifications**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Michael J. Ileo. My business address is James Center III, Suite 601, 1051 East
4 Cary Street, Richmond, Virginia 23219.

5 **Q. WHAT IS YOUR OCCUPATION?**

6 A. I am President and Chief Economist of Technical Associates, Inc. ("TAI"), which is an
7 independent business research and economic consulting firm located in Richmond, Virginia. Since
8 its formation in 1969, TAI has provided a wide variety of economic, financial, and other technical
9 consulting services to government and private clients throughout the United States and Canada.
10 Many of these engagements have involved utility and insurance matters before state and federal
11 regulatory bodies, as well as antitrust, franchise, patent infringement, and other business issues in
12 civil litigation before state and federal courts.

13 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND EDUCATION.**

14 A. Prior to and since co-founding TAI, I have practiced as an economic consultant to various
15 business organizations and government agencies. As part of the utility regulatory work performed
16 by TAI, I have presented expert testimony with respect to cost of service, depreciation, cost
17 separations and allocations, rate design, cost of capital, revenue requirement, and related issues
18 before most federal regulatory agencies. These include the Federal Energy Regulatory Commission,
19 Federal Power Commission, Federal Communications Commission, Interstate Commerce
20 Commission, Department of Energy, Nuclear Regulatory Commission, and the Federal Maritime
21 Commission in the United States, as well as the National Energy Board in Canada.

1 Over the past some 32 years, I have also appeared as an expert witness on regulatory issues
2 involving telephone, electric, water, natural gas, and oil pipeline companies before a number of state
3 and provincial regulatory authorities. These include Alaska, Arizona, Arkansas, California,
4 Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Illinois, Indiana, Kentucky,
5 Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Jersey, New Mexico,
6 New York, Ohio, Oregon, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Texas, Virginia,
7 Washington, West Virginia, and Wisconsin in the United States, and British Columbia, New
8 Brunswick, Ontario, and The Yukon in Canada.

9 I hold a Ph.D. in economics (1972) from Virginia Tech, as well as B.S. (1965) and M.S.
10 (1967) degrees in economics from the University of Rhode Island. A more complete statement of
11 my professional and educational background is presented in Exhibit ____ (MJI-1) to my testimony.

12 **Q. WHAT IS YOUR EXPERIENCE IN TELECOMMUNICATIONS REGULATION?**

13 A. I have presented expert testimony on wide variety of matters involving telephone companies,
14 both of a traditional and contemporary nature. These include revenue requirement determinations,
15 depreciation studies, and embedded direct and fully allocated cost analyses, as well as long-run
16 incremental cost studies.

17 For example, I recently assisted the Nevada Attorney General in developing public
18 interest safeguards with respect to the creation of an advance service subsidy of SBC, Inc., whereby
19 assets, personnel, and customers pertaining to advanced services will be spun-off from Nevada Bell
20 into this subsidy. I am presently advising the Maryland People's Counsel in connection with line-
21 sharing issues in proceedings involving digital subscriber line (DSL) provisioning over copper loops.
22 I am further representing the Virginia Attorney General with respect to third-party testing of Bell
23 Atlantic's Operation Support Systems (OSS), as well as regarding revisions to the access charges
24 of local telephone companies in Virginia to interexchange carriers.

25 **Q. TO WHAT EXTENT, DR. ILEO, HAVE YOU PREVIOUSLY APPEARED BEFORE THE**
26 **ARIZONA CORPORATION COMMISSION?**

27 A. I have appeared before this Commission on many occasions during my professional career.
28 Within the context of a number of different proceedings, I have presented expert testimony
29 regarding a wide-variety of electric, natural gas, and telephone regulatory matters on behalf of the

1 Arizona Corporation Commission Staff ("ACC Staff"), the Residential Utility Consumer Office
2 ("RUCO"), and other parties such as the City of Phoenix.

3 Most recently, I participated in Docket No. T-01015A-97-0024 et al. on behalf of the
4 Arizona Payphone Association ("APA"). That proceeding involved a complaint of the APA that the
5 payphone or public access line ("PAL") rates of US West Communications, Inc. ("USWC") in
6 Arizona greatly exceeded a reasonable level given the requirements in Section 276 of the
7 Telecommunications Act of 1996 ("Act") and the corresponding pricing standards (i.e., the "new
8 services test") promulgated by the Federal Communications Commission ("FCC"). In its Decision
9 No. 61304 in that prior PAL case, the Commission approved an agreement between the ACC Staff
10 and the APA that lowered part of the PAL rates of USWC, as well as stated that this matter would
11 be further considered in the next rate case of USWC.

12 2.0 Overview of Findings and Recommendations

13 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

14 A. I have been again retained by the APA to examine the rates charged to APA members by
15 USWC for its PAL services within the context of Section 276 of the Act, which mandates the
16 removal of all subsidies in the rates charged by incumbent local exchange carriers ("ILECs") for
17 PAL services. Costing standards established by the FCC, designated as the "new services test," are
18 the appropriate criteria for detecting and removing subsidies from the payphone charges of an ILEC.
19 The "new services test" incorporates the concept of "forward-looking economic costs," as
20 distinguished from embedded costs, and is equivalent to the pricing standards of total element long-
21 run incremental cost ("TELRIC") for the wholesale services of ILECs and of total service long-run
22 incremental cost ("TSLRIC") for the retail services of ILECs. These pricing standards further each
23 provide for no more than a reasonable recovery of an ILEC's common costs, also determined on a
24 forward-looking basis.

25 The purpose of my testimony is to present the results of the examination that I have
26 undertaken on behalf of the APA in accordance with the pricing requirements and costing standards
27 referenced above. My testimony further offers recommendations by which the Commission can
28 fulfill the mandates in Section 276 of the Act with respect to the recurring and nonrecurring charges

1 of USWC for its PAL services in Arizona. Since members of the APA principally purchase what
2 are known as Basic PAL ("BPAL") as distinguished from Smart PAL ("SPAL") services, my
3 testimony focuses on the former.^{1/}

4 **Q. PLEASE DESCRIBE YOUR RECOMMENDATIONS TO THE COMMISSION IN THIS**
5 **PROCEEDING.**

6 A. Unlawful subsidies of significant magnitude continue in the BPAL charges of USWC even
7 though passage of the Act occurred nearly four years ago. USWC's application in this proceeding,
8 moreover, is void of any effort to bring its BPAL charges into compliance with mandates in Section
9 276 of the Act. USWC has also essentially ignored Commission Decision No. 61304 in the prior
10 PAL case by failing to present an "accounting of the revenue impact of [that] Order."^{2/}

11 My testimony offers, for the consideration of the Commission, two sets of recommendations
12 by which the unlawful subsidies in the BPAL and other PAL charges of USWC can be removed to
13 fulfill statutory requirements. The first set, which is the more encompassing and appropriate,
14 involves a two-tiered process comprised of what I refer to as "initial" and "final" steps. Under the
15 "initial" step, all of USWC's proposed recurring and nonrecurring Arizona tariffed rates for flat and
16 measured rate BPAL services are lowered by amounts ranging from 36% to 80% on a statewide
17 basis. With respect to flat BPAL, for example, USWC's proposed Arizona tariffed recurring rate
18 is reduced from \$42.31 to \$21.80 per month, a decrease of 48.5%. Corresponding "initial" step
19 reductions of 53.3% apply to USWC's Arizona tariffs for the access and usage elements of its
20 statewide measured rate BPAL service.^{3/}

21 These "initial" decreases do not take into account that, in addition to Arizona tariffed rates,
22 BPAL subscribers currently pay another \$11.37 each month to USWC per payphone line --
23 consisting of the Federal end-user common line charge ("EUCLC") of \$8.59, which is scheduled to

^{1/} BPAL service is provided to a "smart" payphone which contains its own internal features that operators of "dumb" payphones must purchase as part of SPAL service from ILECs. USWC's cost studies in this case show a total recurring cost additive of \$**** per month for flat rate SPAL over flat rate BPAL. See the electronic file underlying USWC's PAL cost studies designated as AZRDCN200002958.xls, Tab WINPC3 Output (INT).

^{2/} Commission Decision No. 61304 states specifically that "US West and Citizens shall keep an accounting of the revenue impact of this Order which may be considered, as appropriate, in their next respective rate cases filed with the Commission."

^{3/} See Schedule 4 of Exhibit ____ (MJI-2) for a comparison of the Arizona jurisdictional USWC Proposed and the "initial" step APA Proposed tariffed rates for USWC's recurring and nonrecurring statewide flat and measure rate BPAL services.

1 increase to \$8.83 on August 11, 2000,^{4/} and the Federal presubscribed interexchange carrier charge
2 ("PICC") of \$2.78. Upon implementing the "initial" step reductions outlined above, therefore, the
3 BPAL charges of USWC will continue to violate the Act.

4 An accurate removal of these remaining unlawful subsidies requires the results of cost studies
5 of USWC's PAL services performed in manner consistent with standards in the Act and with
6 findings in Commission No. 60635, where the latter sets forth long-run incremental cost procedures
7 and input values for determining rates applicable to USWC's unbundled network elements
8 ("UNEs"). The BPAL and SPAL cost studies of USWC filed in this proceeding, however, meet
9 neither of these requirements. Thus, along with ordering USWC to fulfill the "accounting" provision
10 of Commission Decision No. 61304, USWC should be required by the Commission to properly
11 conduct PAL cost studies so that the "final" step in removing unlawful subsidies from the PAL
12 charges of USWC can be taken.

13 **Q. HOW SHOULD THE COMMISSION PROCEED, DR. ILEO, WITH RESPECT TO THE**
14 **"FINAL" REMOVAL OF UNLAWFUL SUBSIDIES FROM THE PAL CHARGES OF**
15 **USWC?**

16 A. I recommend that, before this proceeding concludes, the Commission issue an order which
17 contains the following major elements:

18 (1) clarifies the engineering/investment parameters in Commission Decision
19 No. 60635 that are specifically applicable to the loop, switching, and other
20 recurring and nonrecurring cost models of USWC;

21 (2) requires USWC to run these models for its PAL services within 60 days
22 using the specified engineering/investment input values along with the
23 economic/financial parameters in Commission Decision No. 60635 and with
24 loop and usage data specifically applicable to PAL; and,

25 (3) establishes a concurrent phase of this proceeding limited to "final" step
26 PAL issues, scheduled to commence 60 days after USWC's submission of
27 the ordered PAL cost studies, to verify their appropriateness and to bring
28 USWC's PAL rates into full compliance with the Act.

29 Until the "initial" steps enumerated above are completed, the Commission further should not
30 consider USWC's requests for geographic deaveraging and pricing flexibility -- at least as these

^{4/} Per July 27, 2000 notice from Julie Archuleta, Account Team Administrator, Wholesale Emerging & Diversified Markets, Qwest Corporation.

1 proposals pertain to PAL services. Substantial danger to competition is inherent in a regulatory
2 structure that permits pricing flexibility of geographically deaveraged rates which contain significant
3 subsidies. For the same reason, the cost studies of PAL ordered by the Commission should be
4 performed by USWC on the same three-tiered geographic basis that it proposes in this proceeding.

5 **Q. WHAT ARE THE DISTINGUISHING CHARACTERISTICS OF THE "INITIAL" AND**
6 **"FINAL" STEPS IN YOUR FIRST SET OF RECOMMENDATIONS?**

7 A. The "initial" Arizona jurisdictional rates that I propose for USWC's BPAL services are based
8 on the TELRIC procedures and economic/financial input values set forth in Commission Decision
9 No. 60635, as well as the engineering/investment parameters contained in USWC's loop, switching,
10 and other cost models. These engineering/investment input values are inconsistent with those found
11 to be reasonable in Commission No. 60635, although the extent of the conflict cannot be presently
12 ascertained. This is true because findings in Commission Decision No. 60635 with respect to
13 engineering/investment parameters are not expressed solely in terms of the loop, switching, and
14 costing models of USWC. Rather, references to another model (i.e., the Hatfield Model) are
15 interwoven into these findings.

16 Clarification of Commission Decision No. 60635 is needed, therefore, in terms of specifying
17 the engineering/investment parameters therein that are applicable to the costing models of USWC.
18 A recent United States Court of Appeals (Eighth Circuit) ruling has underscored the importance
19 specifying the engineering/investment input values appropriately used in ILEC cost models. Since
20 my cost studies of the BPAL services of USWC necessarily do not incorporate this needed
21 clarification of engineering/investment parameters, but presently rest solely on the corresponding
22 input values of USWC, the cost-based rates that result from my studies are necessarily of an "initial"
23 nature.

24 **Q. WHEN YOU SAY THAT SUBSTANTIAL UNLAWFUL SUBSIDIES WILL REMAIN IN**
25 **THE BPAL CHARGES OF USWC AT THE APA PROPOSED "INITIAL" STEP RATES,**
26 **TO WHAT DO YOU REFER?**

27 A. The payments that APA members make each month to USWC are comprised of both Arizona
28 jurisdictional charges and Federal jurisdictional charges. Under the rate proposals of USWC, for
29 example, a flat rate BPAL subscriber would pay the following per month per payphone line:

1	Arizona Jurisdictional Rate	\$42.31
2	Federal Jurisdictional Rates	
3	End-User Common Line Charge (EUCLC)	\$8.59
4	Presubscribed Interexchange Carrier Charge (PICC)	<u>\$2.78</u>
5	Total Revenue	\$53.68

6 Similarly, the results of the flat rate BPAL cost studies presently before the Commission; i.e., those
7 that USWC (\$****) and I (\$21.80) have separately calculated, represent the recurring **Total Cost**
8 per month per payphone line unseparated between the Arizona and Federal jurisdictions. Thus, the
9 recurring unlawful subsidy that remains in the "initial" step flat rate BPAL charges that I propose
10 is \$11.37 per month as contrasted with \$**** per month for USWC:

11		USWC	APA
12		<u>Basis</u>	<u>Basis</u>
13	Arizona Jurisdictional Rate	\$42.31	\$21.80
14	Federal Jurisdictional Rates		
15	EUCLC	\$8.59	\$8.59
16	PICC	<u>\$2.78</u>	<u>\$2.78</u>
17	Total Revenue	\$53.68	\$33.17
18	Total Cost	<u>\$ ****</u>	<u>\$21.80</u>
19	Unlawful Subsidy	\$ ****	\$11.37

20 Additionally, the unlawful subsidy will rise to \$11.61 per month per flat rate BPAL line on
21 August 11, 2000 when USWC's federal EUCLC increases from \$8.59 to \$8.83. Upon specification
22 of the engineering/investment parameters in Commission Decision No. 60635, as well as other
23 appropriate dimensions of a Commission ordered running of USWC's cost models for PAL, the
24 "final" step in removing unlawful subsidies can be taken.

25 **Q. HOW DOES YOUR SECOND SET OF RECOMMENDATIONS DIFFER FROM THE**
26 **FIRST?**

27 A. My second set of recommendations is contingent on the possibility that, due to the numerous
28 and complex issues before the Commission in this proceeding, the Commission may wish to clarify
29 Commission Decision No. 60635 in another proceeding. Should this turn out to be the case, I
30 propose that the statewide Arizona tariffed flat and measured rate BPAL charges of USWC be set
31 for an indefinite interim period at what are referred to in my testimony as USWC Restated costs
32 rather than at APA Proposed costs. These USWC Restated BPAL costs modify the USWC Proposed
33 BPAL costs to account, at least in part, for PAL specific characteristics and for the
34 economic/financial parameters in Commission Decision No. 60635 -- neither of which is true for the

1 BPAL costs presented by USWC in this proceeding. To illustrate, whereas the USWC Proposed
2 total recurring cost of statewide flat rate BPAL is \$**** per month, the corresponding USWC
3 Restated amount is \$24.70 per month.

4 Under my second set of recommendations, accordingly, the Arizona tariffed rate for USWC's
5 statewide flat rate BPAL service is \$13.09 per month, a decrease of 69.1% from the recurring rate
6 proposed for flat rate BPAL by USWC. Taken in relation to a total recurring cost of \$24.70 each
7 month, an Arizona tariffed charge of \$13.09 per month coupled with a Federal charge of \$11.61 fully
8 removes unlawful subsidies. Under my second set of recommendations, rate decreases of 75.9% in
9 the Arizona tariffs for the access and usage elements of USWC's statewide measured rate BPAL also
10 serve to bring these charges into full compliance with the Act.^{5/} These second set rate
11 recommendations for BPAL should remain in effect until the Commission has an opportunity to
12 clarify the engineering/investment input values in Commission Decision No. 60635.

13 **Q. ARE YOU PRESENTING EXHIBITS IN SUPPORT OF YOUR TESTIMONY?**

14 A. Yes. In addition to Exhibit __ (MJI-1), a series of schedules comprise Exhibit __ (MJI-2)
15 to my testimony. These schedules, which document the bases for my findings and recommendations
16 in this case, present various data pertinent to the issue of appropriate charges for the BPAL services
17 of USWC in Arizona. Information in the schedules comprising Exhibit __ (MJI-2) that has been
18 designated as confidential, proprietary, or otherwise sensitive by USWC has been redacted from the
19 ****Non-Confidential Version**** of my testimony.

20 **3.0 Results of the Examination and Related Pertinent Matters**

21 **Q. BASED ON THE EXAMINATION CONDUCTED FOR THE APA, WHAT HAVE YOU**
22 **FOUND REGARDING THE COSTS SHOWN IN THIS CASE BY USWC FOR ITS BPAL**
23 **SERVICES?**

24 A. The costs presented by USWC in this proceeding for its BPAL services are hybrids,
25 inappropriately derived from a mixture of TELRIC and TSLRIC methodologies, which further suffer
26 from numerous inconsistencies and overstatements. USWC's use of the phrase "Fully Allocated
27 Costs" in its cost studies -- a term conventionally employed in connection with embedded costs --
28 is symptomatic of the problems with the BPAL costing procedures of USWC. But at the same time,

^{5/} See Schedule 4A of Exhibit __ (MJI-2).

1 even the resulting excessive cost levels presented by USWC in this case show that its BPAL rates
2 contain large subsidies in violation of Section 276 of the Act and the "new services test" of the FCC.

3 To illustrate, with respect to its flat rate BPAL service in Arizona applicable to "smart"
4 payphones, USWC calculates that the total recurring cost on a statewide basis is \$**** per month.
5 USWC proposes to continue charging, however, \$42.31 each month for its flat rate BPAL service.
6 Since each flat rate BPAL subscriber further pays to USWC monthly amounts of \$8.59 for the
7 Federal EUCLC and of \$2.78 for the Federal PICC, an unlawful recurring subsidy of \$**** (i.e.,
8 \$42.31+\$8.59+\$2.78-\$****) is embodied in these payments even at the significantly overstated total
9 recurring cost of \$**** calculated by USWC.^{6/}

10 **Q. DR. ILEO, HOW DO THE CONCEPTS OF TELRIC AND TSLRIC DIFFER?**

11 A. Philosophically and procedurally the concepts of TELRIC and TSLRIC are quite similar --
12 both reflect in a nearly equivalent manner the economic theory underlying long-run incremental cost
13 ("LRIC") determination in a competitive market structure. Differences between TELRIC and
14 TSLRIC rest in only two conceivable areas within the economic/financial dimensions of LRIC,
15 which can be illustrated by considering ILEC local loops.

16 In the first instance, it should be clear that no difference between TELRIC (wholesale) and
17 TSLRIC (retail) prevails with respect to the engineering/investment parameters applicable to local
18 loops. The same local network design, including outside plant construction is applicable, whether
19 local loops are considered in a bundled wholesale context (TELRIC), an unbundled wholesale
20 context (TELRIC), or a bundled retail context (TSLRIC). On the other hand, the economic/financial
21 parameters appropriately used in conjunction with these universal engineering/investment parameters
22 may differ depending on whether wholesale (TELRIC) or retail (TSLRIC) operations are under
23 evaluation.

24 The most apparent difference between TELRIC and TSLRIC rests with respect to
25 requirements associated with marketing, advertising, customer information, and related business
26 functions. Surely, these requirements are less demanding in wholesale as contrasted with retail
27 markets. Thus, appropriate cost loading applicable to local loops for these functions should be
28 greater in a TSLRIC than in a TELRIC study.

^{6/} The actual recurring Arizona tariffed price of USWC currently in effect for its flat rate BPAL service is \$32.78 per month established pursuant to Commission Decision No. 61304. USWC has appealed this matter, however, and proposes to reinstitute a monthly rate of \$42.31 should it be victorious in this regard. At this present rate of \$32.78 for BPAL, the unlawful recurring subsidy is \$**** per month (i.e., \$32.78+\$8.59+\$2.78-\$****) if USWC's excessive total recurring cost calculation is applied.

1 A second, but less obvious, difference between TELRIC and TSLRIC may prevail upon a
2 proper assessment of relative or differential risk. That is, for example, if the retail markets in which
3 ILEC local loops are effectively sold pose greater business risk than corresponding wholesale
4 markets, the economic/financial parameters used in conjunction with the universal
5 engineering/investment parameters for TELRIC and TSLRIC purposes, as contrasted with TSLRIC
6 purposes should appropriately account for the different levels of relative risk. Such business risk
7 differentials might be recognized by the use of shorter investment service lives, capital structures
8 with thicker equity ratios, or higher debt and equity costs. Some combination of these provisions
9 might also be employed, but considerable care must be exercised when this is done to ensure that
10 no double-counting of risk differences occurs.^{7/}

12 **3.1 USWC's Overstatement of BPAL Costs**

13 **Q. WHY DO THE CALCULATIONS OF USWC OVERSTATE THE RECURRING COST OF** 14 **ITS FLAT RATE BPAL SERVICE?**

15 A. That the total recurring cost of \$**** calculated by USWC for its flat rate BPAL service
16 exceeds a properly determined level is demonstrated by several facts. The major component of the
17 \$**** is a loop and drop cost of \$21.98, which has not been computed by USWC in a manner
18 consistent with Section 276 of the Act and the FCC's "new services test." Rather, the \$21.98 loop
19 and drop cost component has been simply taken by USWC from its statewide UNE rate for 2-wire
20 loops established several years ago.^{8/} As this monthly amount of \$21.98 is not based on the specific
21 characteristics of BPAL, but instead on all of USWC's services in Arizona, its use by USWC as the
22 loop and drop component of the recurring costs of BPAL services violates the requirements of the
23 Act and the FCC.

^{7/} To illustrate, annual year-end payments necessary to amortize a \$1,000 investment at 10% are \$117.72 per year. If the term is lowered to 10 years, holding the rate at 10%, required payments are \$162.75 annually. In essence, this represents roughly a 38% risk adjustment; i.e., $(\$162.75/\$117.72) - 100\%$. However, if both the payback period is shortened from 20 years to 10 years and the rate is increased from 10% to 20%, the annual payment necessary to amortize \$1,000 is \$238.54, which equates to an 103% rather than a 38% risk adjustment.

^{8/} The \$21.98 and other UNE rates of USWC in Arizona were established by Commission Decision No. 60635, entered January 30, 1998 after a lengthy proceeding in Docket U-3021-96-448, et al. that began during 1996. Although it is clear that a TELRIC methodology is embraced for the costing and pricing of USWC's UNEs, Commission Decision No. 60635 does not show the steps by which the statewide composite amount of \$21.98 was specifically reached for the 2-wire loops of USWC.

1 This violation is carried further by USWC, at least in terms of its costing of BPAL services,
2 to USWC's proposed geographic deaveraging of its statewide UNE rate of \$21.98 for 2-wire
3 unbundled loops. USWC's cost studies applicable to BPAL services contain loop and drop monthly
4 recurring cost components of \$20.12 for Inside the Base Rate Area, \$40.65 for Zone 1, and \$63.70
5 for Zone 2.^{9/} These amounts have been calculated by USWC based on aggregate loop counts and
6 attendant average loop investments within each of its three proposed areas of Arizona.^{10/} However,
7 as with USWC's inappropriate use of the \$21.98 UNE rate for costing statewide BPAL services, its
8 application of the corresponding deaveraged figures of \$20.12, \$40.65, and \$63.70 per month to
9 BPAL in each of its proposed three areas of Arizona is equally faulty. This follows because, again,
10 USWC has failed to account in its deaveraging for the specific characteristics of BPAL services
11 either overall or within each of the three proposed geographic areas.

12 **Q. WHAT OTHER PROBLEMS ARE EXHIBITED IN USWC'S COMPUTATION OF COSTS**
13 **FOR ITS BPAL SERVICES?**

14 A. Consider the other component of \$**** incorporated in USWC's total recurring cost
15 calculation of \$**** for flat rate BPAL service applicable to "smart" payphones. This \$****
16 amount includes investment cost and operating expense provisions for non-traffic sensitive central
17 office equipment ("NTS-COE"), as well as for billing and collection, directory listing, and traffic
18 sensitive or usage functions.

19 The \$**** and \$**** components of USWC's total recurring cost calculation for its flat rate
20 BPAL service rest on inconsistent methodologies and input values. Unlike the \$21.98 component,
21 which is a statewide composite figure derived using the TELRIC procedures in Commission
22 Decision No. 60635, the \$**** component is based on TSLRIC procedures of USWC applied to the
23 specific characteristics of BPAL services. Additionally, input values used by USWC in calculating
24 the \$**** component for the cost of money, investment service lives and net salvage values,
25 maintenance factors, expense loadings, and common costs differ radically from the corresponding
26 economic/financial input values that formed the basis of the \$21.98 component in Commission
27 Decision No. 60635.

^{9/} See the same electronic file identified in footnote ^{1/} of my testimony, but Tab WINPC3-Study Summary.

^{10/} See Testimony of Teresa K. Million in Docket No. T-00000A-00-0194, specifically the data contained in Confidential Exhibit TKM-1.

3.2 Correcting the BPAL Cost Calculations of USWC

Q. TO WHAT EXTENT HAVE THE FAULTY AND INCONSISTENT PROCEDURES OF USWC LED IT TO OVERSTATE THE COSTS OF BPAL SERVICES?

A. I have redetermined the costs that USWC incurs in rendering BPAL services in Arizona under two methodologies that progressively remove some of the inconsistencies and correct some of the flaws in USWC's costing procedures. These two methodologies are premised on: (a) that the specific characteristics of BPAL should be used in all instances to fulfill requirements of the Act and the "new services test;" (b) that a TELRIC framework is appropriately applied to BPAL due to the wholesale nature of the service; (c) that the TELRIC input values established in Commission Decision No. 60635 with respect to economic/financial parameters should be consistently employed for costing purposes; and, (d) that USWC's loop, switching, and other models should be utilized, with appropriate modifications where warranted, to determine the forward-looking economic costs of BPAL services.

I refer to the indicated two methodologies as "USWC Restated" and "APA Proposed." A summary of the results from these two sets of cost redeterminations is presented below in comparison to "USWC Proposed" total recurring costs applicable to monthly flat rate BPAL service for "smart" payphones in Arizona:

	(A) USWC <u>Proposed</u>	(B) USWC <u>Restated</u>	(C) APA <u>Proposed</u>
<u>Loop & Drop Cost Component</u>			
Direct & Shared Investment	N/A	N/A	\$14.77
Direct Expenses	N/A	N/A	0.00
Other Expenses	N/A	N/A	0.00
Common Costs	<u>N/A</u>	<u>N/A</u>	<u>2.21</u>
Sub-Total	\$21.98	\$19.88	\$16.98
<u>Other Cost Component</u>			
Direct & Shared Investment	\$****	\$****	\$****
Direct Expenses	****	****	****
Other Expenses	****	****	****
Common Costs	<u>****</u>	<u>****</u>	<u>****</u>
Sub-Total	****	4.82	4.82
<u>Total Recurring Cost</u>	\$****	\$24.70	\$21.80

N/A means not applicable due to the adaptation of the Loop & Drop Cost Component from Commission Decision No. 60635.

1 The steps taken to develop the figures shown for USWC Restated in Column (B) above
2 reflect a consistent application of the TELRIC procedures and input values that underlie the \$21.98
3 to the extent possible given the findings in Commission Decision No. 60635, as well as based on the
4 specific characteristics of BPAL service. With respect to the Loop & Drop Cost Component in
5 Column (B), the amount of \$19.88 per month is the result of determining the relative contribution
6 of BPAL service to the statewide composite of \$21.98 based on comparative loop and drop
7 investments needed by USWC for new business, residential, and PAL lines in the State. Put
8 alternatively, the difference between the USWC Proposed figure of \$21.98 and the USWC Restated
9 figure of \$19.88 per month reflects that the loops needed by USWC for new BPAL services in
10 Arizona are shorter than the statewide average loop length and, hence, cause less loop and drop
11 investment costs to be incurred by USWC relative to other services.

12 Regarding the Other Cost Component for USWC Restated, the difference between the \$****
13 in Column (A) and the \$4.82 in Column (B) is the product of the following:

14 (1) an acceptance at this time of the Direct and Shared Investment that
15 USWC has ascribed to BPAL service, but application to this investment of
16 the economic/financial parameters (e.g., cost of money, maintenance factor,
17 service life, etc.) set forth in Commission Decision No. 60635;

18 (2) an acceptance at this time of the Direct Expenses that USWC has ascribed
19 to BPAL service;

20 (3) a replacement of the Other Expenses and Common Costs that USWC has
21 ascribed to BPAL service because this assignment is inconsistent with
22 findings in Commission Decision No. 60635; and,
23

24 (4) an allowance of 15% for Common Costs on the total of all other costs for BPAL
25 service consistent with the "attributable, joint and common costs" finding in
26 Commission Decision No. 60635.

27 **Q. HOW WERE THE APA PROPOSED AMOUNTS PRESENTED IN YOUR PREVIOUS**
28 **ANSWER DETERMINED?**

29 A. The difference between the Total Recurring Cost amounts shown in Columns (B) and (C)
30 of my prior answer rests only in the monthly recurring Loop & Drop Cost component; i.e., \$19.88
31 for USWC Restated versus \$16.98 for APA Proposed. This latter figure of \$16.98 is the result of:

(1) utilizing PAL-specific loop and drop characteristics, as contained in loop files provided by USWC, applied within USWC's loop and drop investment model (i.e., Regional Loop Cost Analysis Program or "RLCAP") to determine PAL-specific loop and drop investment requirements;^{11/} and,

(2) applying properly determined annual cost factors ("ACFs") to these PAL-specific loop and drop investments, where these ACFs are based on the economic/financial input values in Commission Decision No. 60635.

The amounts for APA Proposed in Column (C) of my prior answer establishes that, as a first approximation, the unlawful subsidy embedded in USWC's proposed recurring prices for flat rate BPAL service is \$31.88 per month; i.e., $\$42.31 + \$8.59 + \$2.78 - \21.80 . At a minimum, these proposed recurring prices of USWC violate the Act and the "new services test" by \$28.98 each month (i.e., $\$42.31 + \$8.59 + \$2.78 - \24.70) as reflected by the costs in Column (B) of my previous answer.

Q. IN VIEW OF YOUR FINDINGS, DR. ILEO, WHAT IS NECESSARY TO BRING USWC'S BPAL RATES IN FULL COMPLIANCE WITH SECTION 276 OF THE ACT?

A. The defects and overstatements in USWC's costing and pricing of flat rate BPAL extends to all aspects of this service in the State; e.g., recurring charges for measured rate BPAL service, non-recurring charges for BPAL service, and recurring and non-recurring charges for vertical services applicable to BPAL such as fraud protection. Figuratively at every turn, unlawful subsidies of substantial magnitudes are embodied in the payments that BPAL subscribers in Arizona make to USWC each month.

^{11/} This parallels the application of PAL-specific usage characteristics within USWC's usage investment model (i.e., Switching Usage Model or "SUM") to determine PAL-specific usage investment requirements as incorporated in Columns (B) and (C) in my previous answer for the Other Cost Component.

To illustrate, the forward-looking switching investments (both traffic and non-traffic sensitive) shown in this case by USWC to be necessary for BPAL service, as a result of its application of SUM, are essentially identical to those in the prior PAL case. Now, as then, I have accepted for present purposes these switching investment amounts given the monthly levels and duration of calls presented by USWC as being specifically applicable to BPAL. Not expectedly, these data show greater usage per payphone line, especially with respect to the number of monthly calls, than for the typical business or residential line; e.g., calls per month on flat rate lines of *** for BPAL, of *** for residential, and *** for business. Hence, comparatively greater amounts of traffic sensitive switching investment are needed by USWC for BPAL services.

Conversely, and also not unexpectedly, the USWC loop files employed in my cost studies show that PAL loops are appreciably shorter than the composite of USWC's loops in Arizona; e.g., **** feet for PAL lines, **** feet for business lines, and **** feet for residential lines. Hence, comparatively lesser amounts of loop and drop investment are needed by USWC for PAL services as determined upon applying USWC's RLCAP model.

1 Material lowerings are necessary to bring the BPAL service charges of USWC in compliance
2 with the non-subsidization requirements in Section 276 of the Act. As an "initial" step towards this
3 end, I recommend that the Commission lower the Arizona tariffed rate of \$42.31 proposed by USWC
4 for flat rate BPAL services to \$21.80 per month within the context of this proceeding, which reflects
5 a decrease of 48.5%. Comparable reductions of 36% to 80% are warranted in this case for all other
6 recurring and non-recurring charges of USWC applicable to BPAL service.

7 Even with these decreases, however, significant unlawful subsidies will remain in the BPAL
8 charges of USWC. With respect to flat rate BPAL service, for instance, the recurring subsidy that
9 will continue under the APA Proposed rates is at least \$11.37 per month; i.e., $\$33.17 - \21.80 , where
10 $\$33.17 = \21.80 for the Arizona tariff + \$8.59 for the Federal EUCLC + \$2.78 for the Federal PICC.
11 This unlawful monthly subsidy of \$11.37 reflects that the APA Proposed "initial" recurring charge
12 of \$33.17 is based on: (1) an acceptance, at this time, of the engineering/investment parameters
13 contained in the RLCAP and SUM procedures of USWC despite the findings in Commission
14 Decision No. 60635; and, (2) an anticipation of a "final" step later in a concurrent phase of this
15 proceeding to fully bring the PAL rates of USWC into compliance with Section 276 of the Act.

16 This "final" step requires clarification of Commission Decision No. 60635 in terms of
17 specifying the feeder and distribution fill factors, easy to difficult placement ratios, and other
18 engineering/investment parameters (as distinguished from economic/financial parameters) properly
19 utilized in the RLCAP, SUM, and other TELRIC models of USWC. The need for clarification is
20 further underscored by the recent July 18, 2000 ruling of the United States Court of Appeals (Eighth
21 Circuit or the "Court") that TELRIC determinations based on a "hypothetical network standard"
22 violate the Act.

23 **3.3 Needed Clarification of Commission Decision No. 60635**
24 **in Removing Unlawful Subsidies**

25 **Q. WHY IS IT NECESSARY THAT THE COMMISSION CLARIFY THE**
26 **ENGINEERING/INVESTMENT INPUT VALUES IN ITS DECISION NO. 60635?**

27 **A.** Several significant and interrelated reasons exist why clarification of the engineering/
28 investment parameters in Commission Decision No. 60635 is necessary; i.e., designation of these

1 input values that are specifically applicable to the costing models of USWC. The importance of the
2 needed clarification is made even more apparent by the recent findings of the Court referenced in
3 my previous answer.

4 In my costing of USWC's BPAL services, I have relied entirely on the RLCAP (specifically
5 Version 3.5) and the SUM models of USWC without modification for purposes of this case.^{12/} That
6 is, I have accepted all of the engineering design, installation procedures, and other time and
7 materials practices represented in Version 3.5 of RLCAP as being applicable to USWC's new BPAL
8 investments in Arizona. I have adopted this convention, even though a number of these
9 engineering/investment parameters appear to be at odds with findings in Commission Decision No.
10 60635. For example, the fill factors and easy to difficult placement ratios incorporated in Version
11 3.5 of RLCAP differ from those deemed to be reasonable in Commission Decision No. 60635.
12 However, since neither the Hatfield Model of AT&T and MCI nor the RLCAP Model of USWC is
13 fully endorsed within Commission Decision No. 60635, it is difficult to gauge whether the
14 engineering/investment parameter findings therein are applicable to the Hatfield Model or the
15 RLCAP Model.^{13/}

^{12/} Version 3.5 of RLCAP was produced by USWC in the last PAL case, in which USWC then asserted that Version 3.5 was appropriate for the loop and drop investment component of BPAL service.

^{13/} To illustrate, based on the discussion at Pages 15-17 with respect to feeder and distribution fill factors, Commission Decision No. 60635 states that "we will approve the fill factors utilized by the Hatfield Model," but also that "we will approve use of the three lines proposed US West." The fill factors cited for the Hatfield Model in this regard are 65% to 80% for feeder and 50% to 70% for distribution. On the other hand, a proposed USWC feeder fill of 33% is indirectly cited; i.e., "feeder fill based upon an allowance of three telephone lines per living unit." Compounding the difficulties of interpreting these findings, Version 3.5 of RLCAP employs fills that are listed therein under "Feeder Fill Information" as **** for Very Small, **** for Small, **** for Medium, and **** for Large wire centers. These figures neither comport with the feeder fill factors of "65% to 80%" cited in Commission Decision No. 60635 for the Hatfield Model nor equate to a "feeder fill based upon...three telephone lines per living unit."

Regarding the easy to difficult placement ratio applicable to the installation of loops, as discussed on Pages 17-19, Commission Decision No. 60635 concludes that the "Commission will adopt the Hatfield Model's method for calculating placement costs." However, while the 18% (easy)/82% (difficult) placement ratio proposed by USWC is rejected by Commission Decision No. 60635, the "Hatfield Model's method" is neither specified nor related to the 18% (easy)/82% (difficult) placement ratio of USWC. Moreover, the latter is used in Version 3.5 of RLCAP, which is given as "Undeveloped %: ****."

The need for clarification of engineering/investment input values in Commission Decision No. 60635 extends to such matters as cable sheath mileage factors and costs (p.15), shared installation costs of aerial, underground, and buried facilities (pgs. 19-20), and terminal installation, line splicing, and drop investments (pgs. 22-23).

1 This difficulty is not posed in Commission Decision No. 60635 with respect to findings on
2 forward-looking economic/financial parameters; i.e., appropriate values for the cost of money,
3 investment service lives and net salvage values, income tax rates, etc. to be used in developing
4 investment annual cost factors ("ACFs"), since these are equally applicable to both the Hatfield and
5 RLCAP Models. Thus, my BPAL cost determinations in this case employ the economic/financial
6 parameters given in Commission Decision No. 60635, but also rely (without modification) on the
7 engineering/investment parameters incorporated in the RLCAP (Version 3.5) Model of USWC
8 applied to the specific loop and drop characteristics of its PAL service in Arizona. The latter is true
9 even though this results in an overstatement of BPAL costs.

10 **Q. PLEASE EXPLAIN THE OVERSTATEMENT OF BPAL COSTS REFERENCED IN YOUR**
11 **PREVIOUS ANSWER.**

12 A. Two aspects of Version 3.5 of RLCAP, taken in relation to Commission Decision No. 60635,
13 highlight that my use (without modification) of this engineering/investment model of USWC results
14 in an overstatement of the recurring cost of BPAL. These pertain to the easy to difficult placement
15 ratio and to feeder fills.

16 Version 3.5 of RLCAP employs a easy (**%)/difficult (**%) placement ratio in Version 3.5
17 of RLCAP for the installation of local loops. Commission Decision No. 60635 rejects this ratio,
18 but does not provide a modified ratio applicable to RLCAP in its ultimate findings. Noted therein,
19 however, is that a placement ratio of 39% (easy)/61% (difficult) is more reasonable than that
20 proposed by USWC. When this placement ratio is used in Version 3.5 of RLCAP, the APA
21 Proposed recurring Loop & Drop Component cost in Schedule 1 of Exhibit ___ (MJI-2) for flat rate
22 BPAL declines from \$16.98 to \$15.48.

23 A further reduction in the APA Proposed monthly Loop & Drop Component to \$14.85 occurs
24 when the feeder fills incorporated in Version 3.5 of RLCAP are modified to reflect the acceptance
25 in Commission Decision No. 60635 of the Hatfield Model feeder fills of 65% to 80%. I have not
26 recommended these lower Loop & Drop Component costs in this proceeding because clarification
27 of Commission Decision No. 60635 is needed in this regard.

1 **3.4 Role of the Recent Federal Court Opinion in Interpreting the Act**

2 **Q. WHAT IS THE ROLE OF THE RECENT COURT DECISION IN THE NEED FOR**
3 **CLARIFICATION OF COMMISSION DECISION NO. 60635?**

4 A. While not an attorney, my reading as an economist of the Court's ruling is that use of
5 hypothetical models of ILEC operations (such as the Hatfield Model) for determining the "forward-
6 looking economic costs" of ILEC services violates the Act. On the other hand, the reasonableness
7 of the economic/financial input values in Commission Decision No. 60635 is effectively upheld by
8 the Court's findings, as these are not dependent on the local network models and attendant
9 engineering/investment parameters employed to represent ILEC operations. However, because one
10 cannot distinguish the engineering/investment input values that are applicable to the Hatfield Model
11 from those that are applicable to the RLCAP Model in Commission Decision No. 60635, the Court's
12 ruling requires clarification of these input values.

13 **Q. AS AN ECONOMIST, HOW DO YOU CONCLUDE THAT THE COURT'S RULING**
14 **EFFECTIVELY UPHOLDS THE REASONABLENESS OF THE ECONOMIC/FINANCIAL**
15 **PARAMETERS IN COMMISSION DECISION NO. 60635?**

16 A. In Part II.A.1 (Pricing Methodology, Hypothetical Network Standard), the Court finds that
17 a TELRIC determination made on the basis of a hypothetical network "violates the clear meaning
18 of the Act." Noted by the Court in this regard is that "Congress did not intend costs to be based on
19 those which some imaginary carrier would incur by providing the newest, most efficient, and least
20 cost substitute..." But at the same time, the Court finds that "Costs can be forward-looking..." and
21 further in Section II.A.2 (Pricing Methodology, Use of a Forward-Looking Methodology), that
22 "TELRIC provides for a "normal" [economic] profit and that level of profit is reasonable within the
23 meaning of the statute."

24 Since the Court refers primarily to the FCC's determinations in its First Report and Order
25 with respect to the UNE rates of ILECs mandated by the Act, I conclude that the "forward-looking
26 economic costs" discussed therein have two major dimensions: those that are of an
27 economic/financial nature and those that are of an engineering/investment nature. As an economist,
28 I see nothing in the Court's opinion that challenges the economic/financial determinations set forth

1 in the FCC's First Report and Order. However, as the engineering/investment findings therein are
2 predicated on hypothetical "proxy" models of ILEC operations, the Court concludes that these
3 findings violate the Act. Without clarification of similar engineering/investment findings in
4 Commission Decision No. 60635, an equivalent situation will prevail in Arizona.

5 **Q. WHAT OTHER ASPECTS OF THE COURT'S RULING ARE RELEVANT TO THE BPAL**
6 **RATES OF USWC IN THIS CASE?**

7 A. The Court emphasizes the importance of implicit provisions of the Act that are explicit with
8 respect to payphone rates. To illustrate, in Section II.A.3 (Pricing Methodology, Effect of Universal
9 Service Subsidies), the Court finds that "costs of universal service subsidies should not be included
10 in the costs of providing the network elements." Similarly, unlawful subsidies should not be
11 incorporated in the BPAL charges of USWC.

12 **Q. DOES THE COURT'S RULING, DR. ILEO, IMPACT THE FCC'S "NEW SERVICES**
13 **TEST" IN ANY WAY?**

14 A. While again not a lawyer, my experience indicates that the Court's findings will have no
15 bearing on the "new services test" of the FCC. I say this because, at no time during my professional
16 carrier, have I seen the "new services test" applied using a "hypothetical network standard," either
17 by an ILEC or in terms of such a requirement imposed by the FCC.

18 **3.5 Proper Use of USWC's RLCAP Model**

19 **Q. IS RLCAP AN APPROPRIATE MODEL FOR DETERMINING THE FORWARD-**
20 **LOOKING LOOP AND DROP INVESTMENT COSTS OF USWC APPLICABLE TO BPAL**
21 **SERVICE IN ARIZONA?**

22 A. Yes, but only if properly applied. That is, as long as appropriate input values are employed
23 with respect to engineering/investment parameters, RLCAP (Version 3.5 in this case) reasonably
24 determines the forward-looking investments required by USWC upon installing new BPAL loops
25 and drops in Arizona. By the term "appropriate input values," I refer to service-specific loop files
26 accurately representing the locational patterns of BPAL service; engineering design criteria that
27 strike a proper balance between current and future capacity and technology needs, such as with

1 respect to the mix of copper and fiber, as well as to fill and/or utilization factors; vendor prices for
2 BPAL loop plant and equipment (e.g., cable and wire, poles, conduit, etc.) properly reflecting
3 quantity discounts; and, installation standards that reasonably represent the labor time and rates
4 required for new BPAL loop placements.

5 **Q. WHAT IS THE BASIS OF YOUR PREVIOUS ANSWER?**

6 A. Version 3.5 of RLCAP is the forerunner of engineering design and costing models of outside
7 plant installations for local telephone networks developed by Bell Labs and subsequently by Bellcore
8 with the breakup of the Bell System. Upon examining these models numerous times over the past
9 32 years, I generally have found them to accurately represent customary and prevailing outside plant
10 installation practices within a jurisdiction, as well as aimed at achieving cost-effectiveness given the
11 engineering design criteria employed. On certain occasions, however, I have challenged particular
12 input values used in these models -- either because they were factually incorrect due to an oversight
13 (e.g., vendor discounts for volume purchasing were not properly taken into account) or because they
14 incorporated expectations about the future that were unwarranted (e.g., a radical shift in the
15 deployment of fiber over copper).

16 **Q. HAVE YOU UTILIZED RLCAP IN PERFORMING COST STUDIES ELSEWHERE?**

17 A. Yes. I have relied upon RLCAP and equivalent models of ILECs in all of my TELRIC and
18 TSLRIC studies, although many times with modifications to certain input values that I judged to be
19 more appropriate for the applicable jurisdiction. This has been true for TELRIC and/or TSLRIC
20 studies that I have performed with respect to ILECs operating in Arizona, Connecticut, Kentucky,
21 Louisiana, Maryland, Nevada, Oklahoma, Rhode Island, Utah, and Virginia. In each of these
22 instances, my disagreement with an ILEC's use of RLCAP or comparable loop and drop model has
23 typically involved the economic/financial values that ILECs subsequently apply to the investments
24 produced by such models, although I have also challenged in certain instances the
25 engineering/investment parameters and service-specific characteristics used by ILECs.

26 I believe that much the same should be true for the TELRIC procedures applied to USWC's
27 BPAL services in Arizona, particularly in view of the recent decision of the Court. However, for
28 this to properly take place in conjunction with fully removing the unlawful subsidies in USWC's
29 BPAL rates, clarification of the input values in Commission Decision No. 60635 for the

1 engineering/investment parameters applicable to RLCAP is necessary. Until that time, which should
2 occur in the future, the proposed BPAL charges of USWC in Arizona should be lowered in "initial"
3 amounts ranging from 36% to 80%.

4 **4.0 Requirements of the Act and FCC**

5 **Q. WHEN REQUIREMENTS OF THE ACT AND FCC ARE CITED IN YOUR TESTIMONY**
6 **WITH RESPECT TO PAL RATES, TO WHAT DO YOU SPECIFICALLY REFER?**

7 A. Section 276 of the Act, entitled Provision of Payphone Service, requires the FCC to prescribe
8 regulations and establish guidelines that achieve pricing and other objectives in the provision of PAL
9 services, one of which is that PAL rates should not contain (either "directly or indirectly") subsidies
10 from or to other telecommunications services of ILECs. In connection with these obligations under
11 the Act, the FCC has ruled that the rates charged for the PAL services of ILEC's, such as USWC,
12 must be cost-based, non-discriminatory, and consistent with the FCC's Computer III pricing
13 guidelines. In particular, at Paragraph 163 of its Payphone Order on Reconsideration, the FCC
14 notes:

15 We require LECs to file tariffs for the basic payphone services and unbundled
16 functionalities in the intrastate and interstate jurisdictions as discussed below.
17 LECs must file intrastate tariffs for these payphone services and any
18 unbundled features they provide to their own payphone services. The tariffs
19 for these LEC payphone services must be: (1) cost based; (2) consistent with
20 the requirements of Section 276 with regard, for example, to the removal of
21 subsidies from exchange and exchange access services; and (3)
22 nondiscriminatory. **States must apply these requirements** and the
23 Computer III guidelines for tariffing such intrastate services...**We will rely**
24 **on the states to ensure** that the basic payphone line is tariffed by the LECs
25 in accordance with the requirements of Section 276...(emphasis added)

26 Computer III tariffing guidelines relate to the FCC's "new services test," for which the FCC
27 stated in The Matter of Price Cap Performance Review for Local Exchange Carriers (CC Docket No.
28 94-1) the following:

29 Under current rules, new service tariff filings must be made on at least 45
30 days notice and be accompanied by detailed cost support. Specifically, a
31 LEC introducing a new service is required to submit cost studies to identify

1 the direct costs of providing the new service, absent overheads. The LEC
2 must use a consistent costing methodology for direct costs for all related
3 services. The LEC may, but does not have to, add a level of overhead costs
4 to the direct costs to support the proposed price of the new service.

5 Uniform overhead loadings are not required, but the LEC must justify its
6 methodology for determining overhead loadings and any deviations from the
7 methodology...In cases where a LEC develops a lower-cost version of an
8 existing service, it may employ non-uniform overhead loadings if necessary
9 for the LEC to break even in providing the service. The new services test
10 thus places a flexible, cost-based upper bound on the prices of new services
11 offered by LECs under price cap regulation.

12 The FCC has also emphasized that a long-run incremental approach (such as TELRIC)
13 should be employed in determining direct costs under the "new services test." For instance, in its
14 initial major decision pertaining to provisions of the Act (i.e., in its First Report and Order in CC
15 Docket No. 96-98, released August 8, 1996), the FCC states at Paragraph 825 that the "new services
16 test...roughly approximates the results of a forward-looking economic cost study." Within Section
17 VII of this decision, moreover, the FCC explains why the concept of "forward-looking economic
18 cost" is consonant with properly made TELRIC determinations.

19 The FCC further notes the following in Paragraph 825: "For elements that have not been
20 subject to the new services test, states may establish proxy ceilings by identifying the direct costs
21 of providing the element and adding a reasonable allocation of joint and common costs." Moreover,
22 in Paragraphs 694 through 698 of Section VII captioned as *Forward-Looking Common Costs*, the
23 FCC provides substantial guidance to state regulators for determining a "reasonable" portion of
24 common costs.

25 **4.1 Continuing Violations of the Prohibition Against Cross-Subsidies**

26 **Q. DO THE BPAL RATES PROPOSED BY USWC IN THIS CASE, DR. ILEO, FULFILL**
27 **SECTION 276 REQUIREMENTS OF THE ACT AND THE "NEW SERVICE TEST" OF**
28 **THE FCC?**

29 **A.** No. This is true even if one were somehow willing to accept the faulty and overstated
30 mixture of TELRIC and TSLRIC proposals of USWC. By illustration, the flawed costing
31 methodology of USWC in this proceeding produces a total recurring cost of \$**** per month for

1 its flat rate BPAL service applicable to "smart" payphones. At the same time, subscribers to this
2 BPAL service will pay \$53.68 per month to USWC under its rate proposals, which consists of \$8.59
3 for the SLC portion, \$2.78 for the PICC portion, and \$42.31 for the Arizona tariffed portion. Thus,
4 in violation of Section 276 of the Act, a cross-subsidy of \$**** to other services is built into
5 USWC's proposed recurring prices for its flat rate BPAL service even upon accepting its faulty and
6 overstated cost determinations.

7 As this comparison further demonstrates, USWC has made no effort in this case to bring its
8 BPAL rates in compliance with Section 276 of the Act. That is, with its continuing appeal of
9 Commission Decision No. 61304 in the prior PAL case, and with its proposal to otherwise leave its
10 BPAL rates unchanged, USWC has effectively ignored the mandates in Section 276 of the Act and
11 the attendant "new services test" standards of the FCC.

12 **Q. DO THE APA PROPOSED BPAL RATES IN THIS CASE FULFILL THE**
13 **REQUIREMENTS OF THE ACT AND FCC?**

14 A. Yes, at least to the extent currently possible. Unlike those of USWC, the APA proposed
15 BPAL rates follow directly from a consistently derived set of determinations regarding "forward-
16 looking economic costs" in a TELRIC context that specifically relate to the wholesale characteristics
17 of BPAL service and comprehensively incorporate the authorized input values in Commission
18 Decision No. 60635 to the extent possible.^{14/} The first step proposed by the APA in properly relating
19 BPAL prices to BPAL costs is comprised of rate reductions ranging from 36% to 80% that are
20 designed to significantly (but not totally) remove unlawful subsidies from USWC's PAL rates so
21 that they far better reflect appropriate levels of "forward-looking economic costs" as required by the
22 Act.

23 The rates proposed by the APA for USWC's BPAL service constitute a responsible first step
24 towards removing unlawful subsidies from its BPAL pricing, while recognizing that this mandate
25 cannot be fully achieved until appropriate engineering/investment parameters of RLCAP, SUM, and
26 other TELRIC models of USWC are specified. Further, until BPAL and other PAL rates are

^{14/} The wholesale nature of PAL service has been officially recognized by USWC. Recently, USWC converted from a manual to an electronic form for ordering PAL services. Accompanying this transition, USWC has designated the electronic ordering form for PAL services as "Wholesale Market." Also see the notice from Julie Archuleta of the Wholesale Emerging & Diversified Markets division of Qwest.

1 established in light of such a specification, the Commission should defer consideration of USWC's
2 requests for pricing flexibility in designated competitive zones and to geographically deaverage its
3 statewide UNE rates for loops into three areas of the State -- at least as these proposals pertain to
4 BPAL services.

5 **4.2 Necessary Deferral of Pricing Flexibility and Geographic Deaveraging Authority**

6 **Q. PLEASE EXPLAIN YOUR COMMENTS REGARDING THE RELATIONSHIP BETWEEN**
7 **USWC'S REQUESTS FOR PRICING FLEXIBILITY AND GEOGRAPHIC**
8 **DEAVERAGING AS THEY PERTAIN TO BPAL.**

9 A. As noted earlier in my testimony, USWC proposes to inappropriately tie a significant portion
10 of the total recurring cost of BPAL service to its UNE rates for unbundled 2-wire loops, both on a
11 statewide (\$21.98) basis and on a three-tiered (\$20.12, \$40.65, and \$63.70) geographically
12 deaveraged basis. None of these amounts are specifically applicable to BPAL services and, hence,
13 would violate Section 276 of the Act if approved by the Commission. Similarly, since these faulty
14 cost determinations form a significant part of the basis for USWC's rate proposals in this proceeding
15 -- on which its proposed pricing flexibility will be based if allowed -- neither of these proposals
16 should be approved until matters are resolved in relation to the proper engineering/investment
17 parameters that should be employed in RLCAP to determine the loop and drop investments
18 applicable to BPAL, on both a statewide and geographically deaveraged basis.

19 Although to a lesser degree, the same is true under the "initial" step statewide BPAL rates
20 that I recommend in this proceeding. By illustration, since unlawful subsidies are contained in a
21 statewide flat rate BPAL charge of \$33.17 (i.e., \$21.80+\$8.59+\$2.78), funds generated by this
22 charge will be available to USWC in its exercise of pricing flexibility that would not exist otherwise.
23 The danger inherent in such a condition is apparent, as USWC will be able to selectively price
24 without being subject to the forces that normally prevail in competitive markets. That is, unlike a
25 competitive firm whose prices are subsidy free by definition, which sharply curtails its ability to
26 price discriminate, the presence of unlawful subsidies along with the granting of pricing flexibility
27 to USWC poses the prospect that this authority could endanger the further development of local
28 telephone competition in Arizona.

1 **Q. WHEN SHOULD THE COMMISSION CONSIDER THE PRICING FLEXIBILITY AND**
2 **GEOGRAPHIC DEAVERAGING PROPOSALS OF USWC?**

3 A. Once the costs of USWC's BPAL services are appropriately determined, and its
4 corresponding BPAL charges are brought into full compliance with the Act, USWC's requests for
5 pricing flexibility and geographic averaging are properly considered. I note in this regard that the
6 appropriate costing of BPAL should be performed on the same geographic deaveraging basis
7 proposed by USWC for its other wholesale services.

8 Pricing flexibility and geographic deaveraging matters, moreover, can be addressed
9 expeditiously under the scheduling that I envision. Upon the Commission's clarification of Decision
10 No. 60635 before the conclusion of this case, USWC should be able to produce the corresponding
11 costing results for BPAL and its other PAL services from RLCAP, SUM, and its other models within
12 60 days. The development of "final" step rates for BPAL on an appropriate geographic deaveraged
13 basis; i.e., those that fully remove unlawful subsidies, should require no more than another 60 days.
14 Thus, by at least mid-2001, necessary conditions should be in place to consider the pricing flexibility
15 and geographic deaveraging proposals of USWC on a proper basis.

16 **5.0 Recurring Cost of Flat Rate BPAL Services**

17 **Q. WHICH SCHEDULE OF EXHIBIT___(MJI-2) CONTAINS THE DETAILS OF THE APA**
18 **PROPOSED TOTAL RECURRING COST OF USWC'S FLAT RATE BPAL SERVICE?**

19 A. Schedule 1 of Exhibit__(MJI-2), consisting of three pages, itemizes the components of the
20 APA Proposed amount of \$21.80 in comparison to those comprising the USWC Proposed (\$****)
21 and the USWC Restated (\$24.70) total recurring monthly costs for its flat rate BPAL service. Page
22 1 of Schedule 1 presents the cost components for Loop & Drop, NTS-COE, Billing & Collection,
23 Directory Listing, and Usage categorized by Direct and Shared Investments, Direct Expenses, Other
24 Expenses, and Common Costs. Pages 2 and 3 document the sources and calculations underlying
25 these component cost amounts for USWC's flat rate BPAL service.

1 **5.1 Details of Restating and Modifying USWC's Cost Calculations**

2 **Q. HOW WERE THE AMOUNTS DISPLAYED IN SCHEDULE 1 DETERMINED?**

3 A. The amounts shown for USWC Proposed have been taken directly from its cost study filings
4 in this proceeding. With respect to USWC Restated, the Loop & Drop cost component (\$19.8756)
5 is the result of attributing the USWC Proposed Amount of \$21.98 (i.e., its statewide UNE rate for
6 2-wire loops) to BPAL services based on the specific loop characteristics and attendant loop and
7 drop investment requirements for PAL lines taken in relation to those for the composite of USWC's
8 residential, business, and PAL lines in Arizona. These investment amounts have been determined
9 using Version 3.5 of RLCAP (without modification) and the residential, business and PAL-specific
10 loop files provided by USWC in the last PAL proceeding.

11 The remaining cost component amounts in Schedule 1 for USWC Restated (i.e., NTS-COE,
12 Billing & Collection, Directory Listing, and Usage) reflect the following steps:

13 (A) an acceptance (at this time) of the Direct and Shared Investments and
14 Direct Expenses claimed as necessary by USWC for its delivery of flat rate
15 BPAL service, including underlying patterns of payphone utilization, such as
16 the number of calls per month and the minutes of use per call; the time spent
17 by USWC employees directly attributable to the rendering of BPAL service;
18 and, the wages, salaries, and related expenses associated with the work
19 performed by these employees in USWC's supply of new BPAL services;

20 (B) the application of forward-looking annual cost factors ("ACFs") to the
21 Direct and Shared Investments in (A) developed based on the
22 economic/financial input values specified in Commission Decision No.
23 60635 rather than the corresponding input values used in USWC's cost
24 studies in this case, where these forward-looking ACFs (shown in Schedule
25 3) contain provisions for the recovery of capital, depreciation, income tax, ad
26 valorem, and maintenance costs, as well as right-to-use fees where
27 applicable; and,

28 (C) a replacement of the Other Expenses and Common Costs included in
29 USWC Proposed amounts by a single Common Cost provision of 15% based
30 on the findings reached in Commission Decision No. 60635.

31 The amounts shown in Schedule 1 for APA Proposed differ from those for USWC Restated
32 only with respect to the Loop & Drop component; i.e., \$16.9824 versus \$19.8756 per month. Unlike
33 the latter figure, which simply reflects an allocation of USWC's statewide UNE rate for 2-wire loops

of \$21.98, the Loop & Drop cost component of \$16.9824 represents the monthly forward-looking Direct and Shared Investment costs, Direct Expenses, and Common Costs specifically attributable to USWC's flat rate BPAL service in Arizona calculated in accordance with Commission Decision No. 60635, except with respect to appropriate engineering/investment input values. Derivation of the amounts shown in Columns (1) and (2) on Page 1 of Schedule 1 for the Loop & Drop component of APA Proposed is presented in Schedule 1A of Exhibit __ (MJI-2).

Q. WHY DID YOU REPLACE THE AMOUNTS FOR OTHER EXPENSES AND COMMON COSTS USED IN THE BPAL COST STUDIES OF USWC?

A. Upon discussing the evidence of the parties on the issue of "Corporate Overhead," Commission Decision No. 60635 concludes that "we will adopt an overhead cost factor, including attributed, joint and common costs, of 15 percent" (p.13). This economic/financial parameter finding is clearly applicable to both the Hatfield and RLCAP Models. However, the combination of Other Expenses and Common Costs shown on Page 1 of Schedule 1 for USWC Proposed greatly exceeds 15% of the sum of Direct and Shared Investment costs and Direct Expenses; i.e., about ****% for each of NTS-COE, Billing & Collection, Directory Listing, and Usage.

Of this ****% cost loading, the vast preponderance (roughly **%) relates to Other Expenses, which is comprised of three categories designated by USWC as Directly Assigned, Network Support, and Attributable. Directly Assigned includes provisions for Product Management Costs, Sales Expenses, Advertising Costs, and Business Fees. The Network Support category is comprised of Network Operations and Network Support Asset costs, while the Attributable category consists of cost provisions for General Purpose Computers, Uncollectibles, Accounting, & Finance, Human Resources, Information Management, and Intangibles. For example, with respect to Other Expenses (\$****) and Common Costs (\$****) shown for Usage corresponding to USWC Proposed on Page 1 of Schedule 1, the following distribution applies:

Other Expenses	<u>Amount</u>	<u>Percent</u>
Directly Assigned	\$****	****%
Network Support	****	****
Attributable	****	****
Sub-Total	****	****
Common Costs	****	****
Total	\$****	100.0%

1 Many of the costs included in the above categories and assigned to BPAL by USWC are
2 questionable, either in whole or in part, due to the wholesale nature of BPAL service. Appropriately,
3 Commission Decision No. 60635 resolves the controversy often surrounding such matters by its
4 finding that 15% is a reasonable provision for "attributed, joint and common costs." My forward-
5 looking economic cost studies of BPAL services, unlike those of USWC, incorporate this provision.

6 **Q. WHAT DO THE DATA ON PAGE 3 OF SCHEDULE 1 REPRESENT, DR. ILEO?**

7 A. Page 3 of Schedule 1 shows the Direct and Shared Investments ascribed by USWC to the
8 Usage component of its statewide BPAL service. As with the NTS-COE component, which also
9 overwhelmingly consists of Digital Switching Equipment (FRC 377C), my cost studies accept (at
10 this time) USWC's investment calculations via its SUM procedures applicable to BPAL usage.

11 The amounts listed in Column (1) for Direct Investment have been taken explicitly from the
12 BPAL cost studies of USWC, while those in Columns (2) and (3) have been determined upon
13 applying the Shared Building (****% and ****%) and Shared Land (****% and ****%) investment
14 factors proposed by USWC. As these calculations further suggest, my cost studies also presently
15 accept the shared investment factors proposed by USWC.

16 **Q. PLEASE EXPLAIN THE RELATIONSHIP BETWEEN DIRECT AND SHARED**
17 **INVESTMENT?**

18 A. The amount shown in Column (1) of \$**** represents what the SUM procedures of USWC
19 calculate as the total Direct Investment needed, on average, by USWC to fulfill the calling
20 requirements of a new BPAL subscriber with typical usage characteristics given the
21 engineering/investment parameters incorporated in SUM. Of this total amount, \$**** corresponds
22 to Digital Switching Equipment (FRC 377C).

23 Obviously, USWC does not add Digital Switching Equipment to its facilities in such small
24 increments each time an additional BPAL line is connected to USWC's local network. Rather,
25 consistent with TELRIC methodology, the amount of \$**** answers the question of what is the
26 average FRC 377C Investment required to fulfill the usage needs of a typical new BPAL subscriber
27 in Arizona, if such Direct Investment were installed today given the technology, engineering design
28 criteria, and installation practices reflected in SUM. The \$**** is further predicated on a usage

1 pattern for a typical flat rate BPAL customer of ***** calls per month and ***** minutes per call.^{15/}
2 Procedures in SUM work such that any line added to USWC's local network with these same usage
3 characteristics will generate a usage-related Direct Digital Switching Investment of \$*****. In this
4 sense, the generic nature of SUM appropriately becomes service-specific when particular usage
5 patterns (such as those for flat rate BPAL) are explicitly taken into account.

6 Shared Investment is not directly needed to perform usage-related functions such as
7 switching, but is equally necessary as Direct Investment. The provisions shown on Page 3 of
8 Schedule 1 for Shared Building and Land Investment reflect that Digital Switching Equipment and
9 other Direct investment are necessarily housed in structures physically situated on parcels of land.
10 I have accepted the USWC proposed shared factors incorporated in SUM and Version 3.5 of RLCAP
11 for purposes of my present testimony.

12 **5.2 Applying the RLCAP Model of USWC**

13 **Q. WITH RESPECT TO THE APA PROPOSED TOTAL RECURRING COST OF FLAT RATE**
14 **BPAL SERVICE ON PAGE 1 OF SCHEDULE 1, HOW DID YOU DETERMINE THE**
15 **INVESTMENT RELATED COSTS FOR THE LOOP AND DROP COMPONENT?**

16 **A.** The total monthly amount of \$16.9824 on Page 1 of Schedule 1 is comprised of Direct
17 Investment Costs (\$*****), Shared Investment Costs (\$*****), and Common Costs (\$*****). The
18 determination of these APA Proposed investment related recurring costs applicable to flat rate BPAL
19 is presented in Schedule 1A of Exhibit___(MJI-2).

20 As depicted therein, the recurring monthly costs of \$***** (direct investment) and \$*****
21 (shared investment) are developed by applying annual cost factors ("ACFs") to each type of
22 investment within the Loop and Drop component needed by USWC to serve a new flat rate BPAL
23 customer. The economic/financial parameter findings in Commission Decision No. 60635 have been
24 used to develop the ACFs listed in Column (3) of Schedule 1A, which are discussed in some detail
25 later in my testimony in connection with Schedule 3 of Exhibit___(MJI-2).

^{15/} See the electronic file underlying USWC's cost studies designated as AZRDCN20002958.xls, Tab Inputs. In contrast to flat rate BPAL, flat rate business is ***** calls per month and ***** minutes per call, while flat rate residential is ***** calls per month and ***** minutes per call.

1 The investment figures shown by Field Reporting Code (FRC) in Columns (1) and (2) of
2 Schedule 1A are the result from my running of Version 3.5 of RLCAP using the PAL-specific loop
3 files of USWC, along with its loop files that describe the loop characteristics applicable to all of its
4 lines in Arizona; i.e., business, residential, and PAL. The results produced by this running of
5 RLCAP represent the investments that USWC currently makes on a statewide basis, given the
6 engineering/investment parameters incorporated in Version 3.5, to accommodate the service needs
7 of a new BPAL subscriber within USWC's local network presently configured to fulfill the service
8 needs of all its business, residence, and PAL customers in the State.

9 To aid in understanding the premises and procedures incorporated in of RLCAP, Schedule
10 1B of Exhibit___(MJI-2) contains an excerpt from USWC's User Manual for Version 3.5 of
11 RLCAP. A review of this document not only facilitates a comprehension of the internal workings
12 of Version 3.5, but further underscores the importance of the roles played by both
13 engineering/investment parameters, and service-specific loop files in the results produced by RLCAP
14 for Arizona.

15 **Q. WHERE IN SCHEDULE 1B IS EMPHASIS PLACED ON THE ROLES OF**
16 **ENGINEERING/INVESTMENT PARAMETERS AND LOOP FILES IN RLCAP?**

17 A. Page 14 of Schedule 1B, captioned "Assumption and Needs Analysis," summarizes the
18 importance of the various engineering/investment input values employed in RLCAP. Within the text
19 of the User Manual for RLCAP, many of the engineering/investment parameters for which
20 clarification of Commission Decision No. 60635 is necessary are further specifically identified.

21 Regarding the loop files utilized in Version 3.5 of RLCAP, Pages 8 and 9 of Schedule 1B
22 states the following:

23 ****_****
24 • •
25 • •
26 • •
27 • •
28 • •
29 • •
30 • •
31 • •
32 • •
33 ****_****

1 ****
2 •
3 •
4 •
5 •
6 ****

7 Under Section 276 mandates of the Act prohibiting unlawful subsidies, the ****
8 in this proceeding are those who subscribe to the BPAL services of USWC.

9 **6.0 Recurring Cost of Measured Rate BPAL Service**

10 **Q. DO YOU ALSO PRESENT A SCHEDULE SHOWING THE BASIS OF THE APA**
11 **PROPOSED RECURRING CHARGES FOR THE MEASURED RATE BPAL SERVICE OF**
12 **USWC?**

13 A. Yes. Schedule 2 of Exhibit __ (MJI-2), which is structured similarly to Schedule 1, presents
14 a comparison of the USWC Proposed, USWC Restated, and APA Proposed total recurring costs for
15 USWC's measured rate BPAL service. Schedule 1 (flat rate BPAL) and Schedule 2 (measured rate
16 BPAL) differ in only two respects, both within the Usage component.

17 **6.1 Cost Differences Between Flat and Measured Rate BPAL**

18 **Q. PLEASE EXPLAIN THE FIRST DIFFERENCE.**

19 A. The first difference is attributable to the considerably smaller amount of usage-related
20 investment needed by USWC to serve a new measured rate BPAL customer as compared to a new
21 flat rate BPAL customer. This is reflected in a comparison of the USWC Proposed recurring cost
22 for Direct Investment associated with Usage in Column (1) on Page 1 of Schedule 2 of \$****
23 (measured rate BPAL) with the comparable figure of \$**** (flat rate BPAL) on Page 1 of Schedule
24 1. Direct Investment totaling \$**** for measured rate BPAL on Page 2 of Schedule 2 further
25 compares to the corresponding figure of \$**** for flat rate BPAL on Page 3 of Schedule 1.

26 My cost studies accept (at this time) both of these Direct Investment figures related to the
27 Usage component as proposed by USWC. However, I apply different ACFs to these investment

1 amounts based on the economic/financial input values found to be reasonable in Commission
2 Decision No. 60635.

3 **Q. WHAT IS THE CAUSE OF THE SECOND DIFFERENCE?**

4 A. The second difference involves what appears to be an oversight in USWC's calculations
5 pertaining to the Usage component. For example, note that the total recurring cost for USWC
6 Proposed is \$**** on Page 1 of Schedule 2 for measured rate BPAL, as contrasted with \$**** for
7 flat rate BPAL. This means that, since USWC uses the same statewide monthly Loop & Drop cost
8 component of \$21.98, the Other Cost component proposed by USWC is \$**** for measured rate
9 BPAL as contrasted with \$**** for flat rate BPAL. Moreover, that the USWC Proposed monthly
10 cost of \$**** (measured rate BPAL) exceeds the corresponding \$**** (flat rate BPAL) is also
11 anomalous with the typical usage patterns presented in the cost studies of USWC; i.e., monthly usage
12 for measured rate BPAL of **** minutes=**** calls x**** minutes per call, as contrasted with
13 monthly usage for flat rate BPAL of **** minutes=**** calls x ** minutes per call.

14 Note further in this regard that, whereas USWC reports monthly Direct Expenses for the
15 Usage component of \$**** in its cost studies for measured rate BPAL as shown in Column (3) on
16 Page 1 of Schedule 2, the corresponding figure reported by USWC for flat rate BPA is \$**** as
17 depicted on Page 1 of Schedule 1. This difference of about \$**** a month appears to be due to an
18 error made by USWC in ascribing additional Billings & Collection costs to measured rate BPAL
19 service; i.e., beyond the \$**** per month already contained in the Billings & Collection component
20 for both flat and measured rate BPAL.

21 **6.2 Tracking and Correcting a Significant Cost Inconsistency**

22 **Q. HOW DO YOU TREAT THE COST OVERSIGHT OF USWC NOTED IN YOUR**
23 **PREVIOUS ANSWER?**

24 A. Both the USWC Restated and APA Proposed correct this oversight in the Usage component
25 on Page 1 of Schedule 2; i.e., a reduction in the Direct Expenses attributable to Usage for measured
26 rate BPAL from a recurring cost of \$***** to \$***** per month. The latter figure compares to
27 \$**** for flat rate BPAL on Page 1 of Schedule 1, which parallels the lower usage volume of the

former relative to the latter, but provides for some additional costs associated with measured rate BPAL.

Q. PLEASE EXPLAIN THE CAUSE OF THE INCONSISTENCY IN THE COST CALCULATIONS OF USWC FOR MEASURED RATE BPAL.

A. At the outset, consider the Direct Expenses per month below presented in the BPAL cost studies of USWC:

<u>Cost Component</u>	<u>BPAL Service</u> ^{16/}	
	<u>Flat Rate</u>	<u>Measured Rate</u>
Billing & Collection	\$*****	\$*****
Directory Listing	\$*****	\$*****
Usage	\$*****	\$*****

The above recurring cost amounts for the Usage component are sourced to "Usage by Type Tab" in the cost studies of USWC, which show the calculations that follow:

	<u>BPAL Service</u> ^{17/}	
	<u>Flat Rate</u>	<u>Measured Rate</u>
(1) Direct Expenses Per Call	\$*****	\$*****
(2) Calls Per Month	*****	*****
(3) Monthly Direct Expenses: (1)x(2)	\$*****	\$*****

As these computations indicate, the source of the \$***** disparity in the BPAL cost studies of USWC is its use of Direct Expenses Per Call that are over 44 times greater (\$*****/\$*****) for measured rate BPAL than for flat rate BPAL. Some small amount of additional monthly expense might be anticipated with respect to measured service, e.g., necessary measurement and recordation of the number and duration of calls. However, as these functions are fully automated, a recurring cost differences as large as about \$***** per month is suspect on its face. Moreover, the cost studies of USWC show that it has already accounted for the somewhat greater measuring and recordation investment needed for measured rate BPAL, the vast preponderance of which resides in Digital Switching Investment (FRC 377C) as shown below:

^{16/} Same as footnote 15/, but Tab Summary by Type (Page 10 for flat rate BPAL and Page 11 for measured rate BPAL).

^{17/} Same as footnote 15/, but Tab Usage by Type (Page 10 for flat rate BPAL and Page 11 for measured rate BPAL).

	BPAL Service		^{18/}
	Flat	Measured	
<u>FRC 377C Investment</u>	<u>Rate</u>	<u>Rate</u>	
Per Call Set-Up	\$***** ^{a/}	\$***** ^{b/}	
Per Conversation Minute	\$***** ^{c/}	\$***** ^{c/}	

^{a/} Of a \$***** total for all usage-related investment.

^{b/} Of a \$***** total for all usage-related investment.

^{c/} Of a \$***** total for all usage-related investment.

Upon further tracing the cause of the \$**** Direct Expense add-on to measured rate BPAL in USWC's cost studies, the following is shown therein with respect to Direct Expenses Per Call ascribed to flat and measured BPAL each month:

	BPAL Service		^{19/}
	Flat	Measured	
<u>Direct Expenses Per Call</u>	<u>Rate</u>	<u>Rate</u>	
Intercept	\$*****	\$*****	
Operator Assistance	*****	*****	
Billing & Collection	*****	***** ^{a/}	
Total	\$*****	\$*****	

^{a/} Per what USWC refers to as "US West Billing and Collection Study," which is not contained in its cost studies. See Tab Inputs (Page 4) of AZRBCN20002958.xls.

It is inconceivable that, in addition to monthly Direct Expenses of \$***** for the Billing & Collection cost component, another nearly **¢ per call (i.e., \$*****) or \$**** per month for Billing & Collection costs could be incurred by USWC in the rendering of measured rate BPAL service. Thus, I have removed this amount from USWC Restated and APA Proposed on Page 1 of Schedule 2, as well as made other adjustments as noted therein. The resulting recurring costs per month for flat and measured rate BPAL compare as follows to those for flat rate BPAL:

^{18/} Same as footnote 17/. These pages of USWC's cost studies show that, in addition to the amounts for FRC 377C, much smaller Call Set-Up Investments are needed in FRCs 4C, 85C, 117C, 257C, 357C, 357CS, 2124, and 845C. The same much smaller figures are used in this regard for both measured rate and flat rate BPAL, except with respect to FRC 2124. Much smaller amounts than those for FRC 377C are also shown for Conversation Minute Investments, but all of the same figures are used for flat rate and measured rate BPAL.

^{19/} Same as footnote 15/, but Tab Usage-Flat and Tab Usage-Meas Bus.

		<u>Cost Components</u>		
		<u>Loop & Drop</u>	<u>Other</u>	<u>Total</u>
1	USWC Proposed			
2	Flat Rate BPAL	\$21.98	\$****	\$****
3	Measured Rate BPAL	\$21.98	\$****	\$****
4	USWC Restated			
5	Flat Rate BPAL	\$19.88	\$4.82	\$24.70
6	Measured Rate BPAL	\$19.88	\$3.79	\$23.37
7	APA Proposed			
8	Flat Rate BPAL	\$16.98	\$4.82	\$21.80
9	Measured Rate BPAL	\$16.98	\$3.79	\$19.95

6.3 APA Proposed Recurring Charges for Measured Rate BPAL

Q. WHAT RECURRING RATES ARE YOU PROPOSING, DR. ILEO, FOR THE MEASURED RATE BPAL SERVICE OF USWC.

A. As an "initial" step in removing unlawful subsidies and bringing USWC's charges for measured rate BPAL service in compliance with the Act, I have designed the Arizona tariffed portion of these recurring charges to maintain parity with the reduction to \$21.80 per month for flat rate BPAL. As with subscribers to the latter, measured rate BPAL customers will still additionally pay \$11.37 (\$8.59 for EUCLC and \$2.78 for PICC) per month under the "initial" step recurring Arizona tariffs recommended by the APA, which are shown below in comparison to those proposed by USWC:

		USWC	APA	Percent
<u>Access Options</u>		<u>Proposed</u>	<u>Proposed</u>	<u>Change</u>
(A) 575 Monthly Call Allowance		\$38.51	\$18.00	-53.3%
(B) No Monthly Call Allowance		\$17.16	\$8.00	-53.3%
<u>Usage Options</u>				
(C) Monthly Calls (¢ per call) ^{a/}		8.0¢	3.74¢	-53.3%
(D) Minutes Per Call (¢ per minute) ^{b/}				
Initial		5.0¢	2.34¢	-53.2%
Additional		1.5¢	0.70¢	-53.3%

^{a/} Applicable to calls in excess of 575 under Access Option (A) and to all calls under Access Option (B).

^{b/} Applicable to minutes per call for call in excess of 575 under Access Option (A) and to minutes per call for all calls under Access Option (B).

1 The Arizona tariffed APA Proposed "initial" charges for measured rate BPAL have been
2 designed to maintain relationships presently contained within the USWC Proposed current rates,
3 while instituting reductions that begin to bring these charges into compliance with the Act. The
4 tariff structure and terms of service, including any time of use discounts that may be applicable,
5 remain unchanged under the APA Proposed charges. Schedule 4 to Exhibit___(MJI-2) details the
6 process by which these Arizona tariffed rates for measured rate BPAL have been developed.

7 **Q. PLEASE ILLUSTRATE HOW PARITY HAS BEEN MAINTAINED IN THE DESIGN OF**
8 **CHARGES FOR MEASURED RATE BPAL SERVICE.**

9 A. Schedule 2A of Exhibit___(MJI-2) presents monthly bill comparisons at the USWC
10 Proposed and the APA Proposed "initial" measured rate BPAL charges under the premise that each
11 payphone call has a duration of ***** minutes. Parity in rate structure is displayed in Schedule 2A
12 by the switching points indicated therein; i.e., the monthly call volumes at which one service option
13 is preferable to another in terms of monthly bills.

14 To illustrate, given the assumption of ***** minutes per call, the No Monthly Call
15 Allowance/Minutes Per Call selection; i.e., Options (B) & (C), is preferable through about 350 calls
16 per month under both the USWC Proposed and the APA Proposed Arizona tariffs. Beyond this
17 calling volume, the 575 Monthly Call Allowance (either with the Monthly Calls or the Minutes Per
18 Call selection); i.e., Options (A) &(C) or Options (A) & (D) in Schedule 2A, become preferable
19 through between 600 and 750 calls per month. Above this monthly level of calling, flat rate BPAL
20 is preferable with respect to both the USWC Proposed and the APA Proposed Arizona jurisdictional
21 tariffs.

22 **Q. WHY IS THE SELECTION OF OPTIONS (B) & (C) NEVER A PREFERRED CHOICE IN**
23 **SCHEDULE 2A?**

24 A. The use of ***** minutes per call, which the PAL-specific data of USWC show is typical for
25 a measured rate BPAL subscriber in the State, is the cause for Option (B) & (C) in Schedule 2A to
26 never be preferred. This would not be the case if the duration of calls was much longer.

27 To illustrate, suppose usage at a payphone were 10 rather than ***** minutes per call.
28 At a volume of 50 calls per month, the following monthly bills would prevail with 10 minutes of use
29 per call:

	USWC	APA
	<u>Proposed</u>	<u>Proposed</u>
Options (B) & (C)	\$21.16	\$9.87
Options (B) & (D)	\$26.41	\$12.32

Thus, while the monthly bill for Options (B) & (C) remains the same as in Schedule 2A, the monthly bill for Options (B) & (D) increase appreciably. As a result, the selection of Options (B) & (C) is preferred at this calling volume (50) and minutes of use (10) per call. This is true even when the monthly SLC (\$8.59) and PICC (\$2.78) charges of USWC are recognized, since all recurring BPAL bills above and in Schedule 2A rise by \$11.37 per month.

7.0 Investment Annual Cost Factors (ACFs)

Q. PLEASE DESCRIBE THE ANNUAL COST FACTORS EMPLOYED IN YOUR TELRIC STUDIES OF THE BPAL SERVICES OF USWC.

A. The annual cost factors ("ACFs") that I apply to the direct and shared TELRIC investments resulting from USWC's RLCAP and SUM represent the annual cash revenue inflows necessary, over the service lives of these investments and after cash payment of all expenses, to produce after-tax cash flows to equity which, when discounted by the cost of equity, have present values equal to the equity financed portion of these investments. The ACFs employed in my TELRIC studies of USWC's BPAL services are also based on the economic/financial parameters specified in Commission Decision No. 60635.

Schedule 3 of Exhibit ___ (MJI-2) presents a comparison of the USWC Proposed and the APA Proposed ACFs corresponding to the various types of plant and equipment investments produced by RLCAP and SUM. As depicted therein, the APA Proposed ACFs are lower than those of USWC in all instances.

7.1 Differences Between APA and USWC Proposed ACFs

Q. WHAT ACCOUNTS FOR THE DIFFERENCES IN ACFs EXHIBITED IN SCHEDULE 3?

A. The primary reason for the ACF differences in Schedule 3 is that USWC employs economic/financial parameters in its ACF computations that differ sharply from those found to be reasonable in Commission Decision No. 60635. An additional reason, but now far less significant

1 than in the prior PAL case, is that USWC appears to presently utilize ACF calculation procedures
2 that differ only slightly from those that I employ.^{20/}

3 **Q. IS A SCHEDULE CONTAINED IN EXHIBIT ___(MJI-2) THAT DEMONSTRATES HOW**
4 **YOUR ACF DETERMINATIONS WERE MADE?**

5 A. Yes. In contrast to the *****% ACF proposed by USWC, detailed development of the APA
6 Proposed ACF in Schedule 3 of 19.95% for Buried Metal Cable (FRC 45C) is presented in Schedule
7 3A of Exhibit ___(MJI-2). As shown in Column (11) of Schedule 3A, the Accumulated Present
8 Value Equity Cash Flow per \$1,000 of FRC 45C investment over its 20-year service life is \$617.00,
9 which reflects the TELRIC findings in Commission Decision No. 60635 that a capital structure with
10 a equity ratio of 61.70% and an equity cost of 12.40% is reasonable. The footnotes to Schedule 3A
11 further demonstrate that my ACF calculations employ all of the economic/financial input values
12 specified in Commission Decision No. 60635; i.e., service lives, net salvage rates, debt ratio, debt
13 cost, equity ratio, equity cost, income tax rate, and maintenance factors. Since the ad valorem
14 (property tax) rate is not given in Commission Decision No. 60635, my ACF determinations employ
15 the *****% ad valorem rate used by USWC within Version 3.5 of RLCAP during the previous PAL
16 case before the Commission.

17 **7.2 Service Life and Net Salvage Parameters**

18 **Q. IN COMPARISON TO THE 20-YEAR SERVICE LIFE AND -7% NET SALVAGE RATE**
19 **FOR BURIED METAL CABLE SHOWN IN SCHEDULE 3A, AS TAKEN FROM**
20 **COMMISSION DECISION NO. 60635, WHAT DOES USWC USE IN ITS PRESENT COST**
21 **STUDIES FOR BPAL?**

22 A. USWC employs ***** net salvage rate of ***** significantly shortened the service life
23 from 20 years to *** years for FRC 45C in its BPAL cost studies submitted in this proceeding. This

^{20/} The specific ACF calculation algorithms currently utilized by USWC are unknown at this time, for they are not incorporated within the electronic files comprising USWC's BPAL cost studies. However, based on my studies to date, USWC appears to have corrected the overstatement problem that existed in its ACF calculation procedures during the prior PAL case. To illustrate, when the ACF for Buried Metal Cable is determined using my computation procedures and the economic/financial parameters proposed by USWC, the result is an ACF of *****%. This compares to the ACF proposed by USWC for Buried Metal Cable of *****%. Thus, for purposes of this case, I have not taken issue with the ACF calculation procedures of USWC.

1 departure from Commission Decision No. 60635 is shown in Schedule 3B of Exhibit ____ (MJI-2),
2 along with other service life and net salvage discrepancies by plant and equipment investment
3 category. The amounts presented in Columns (3) and (4) of Schedule 3B for APA Proposed follow
4 strictly from Commission Decision No. 60635.

5 **Q. IS A SHORTENING IN THE SERVICE LIFE OF BURIED METAL CABLE FROM 20**
6 **YEARS TO *** YEARS APPROPRIATE?**

7 A. No, such a shortening is both inappropriate and unreasonable for two reasons. First, the use
8 of a *** year service life for FRC 45C is inconsistent with the TELRIC findings in Commission
9 Decision No. 60635. Second, with the development and deployment of digital subscribe line (DSL)
10 technology, the service lives of copper loops are becoming longer not shorter. Thus, in the required
11 "forward-looking economic cost" context, no reasonable basis exists to significantly cut the service
12 life of Buried Metal Cable -- the vast preponderance of which resides in copper loops -- from 20
13 years to *** years.

14 **7.3 Capital Cost Parameters**

15 **Q. WHAT CAPITAL COST PROVISIONS ARE INCORPORATED IN THE CURRENT BPAL**
16 **COST STUDIES OF USWC?**

17 A. Schedule 3C contains a comparison between the USWC Proposed and the APA Proposed
18 capital cost provisions for BPAL cost study purposes. As a point of reference, Schedule 3C also
19 presents the capital cost provisions that USWC's proposing for revenue requirement purposes in this
20 case.

21 **Q. HAS USWC JUSTIFIED THE CAPITAL COST PROVISIONS INCORPORATED IN ITS**
22 **BPAL COST STUDIES AS SHOWN IN COLUMN (1) OF SCHEDULE 3C?**

23 A. No. USWC has simply referenced a brief internal corporate study as indicated in the
24 footnotes to Schedule 3C. The extraordinary thin debt (****%) and extraordinary thick equity
25 (****%) ratios therein are particularly questionable, as well as a current equity cost as high as
26 ****%. Questions also surround how the cost of debt, which is traditionally determined on a current
27 basis, can differ for cost study purposes (****%) from revenue requirement purposes (7.39%).

1 USWC's use of the capital costs in Column (1) of Schedule 3C is also surely in conflict with
2 its adoption and geographic deaveraging of its \$21.98 2-wire UNE rate for costing BPAL services.
3 Clearly, since the capital costs listed in Column (3) of Schedule 3C underlie the \$21.98, a departure
4 from these provisions cannot be justified at the same time that the \$21.98 is used as the
5 overwhelmingly dominant element of cost. For the same reasons, my TELRIC studies of BPAL
6 utilize the capital cost provisions in Commission Decision No. 60635 even though the components
7 therein may not be fully representative of current economic conditions; e.g., the debt cost of 7.09%
8 may be too low and an equity ratio of 61.70% may be too high.

9 **Q. ARE YOU SUGGESTING THAT WHEN THE COMMISSION CLARIFIES DECISION NO.**
10 **60635 AS TO ENGINEERING/INVESTMENT PARAMETERS, IT SHOULD ALSO**
11 **REVISIT ITS PRIOR CAPITAL COST FINDINGS?**

12 **A.** No. The Commission may wish, at some later point in time, to reconsider all aspects of its
13 Decision No. 60635 in light of economic and other conditions then prevailing. Under present
14 circumstances, which have existed for several years, the critical need is to remove the unlawful
15 subsidies that prevail in USWC's charges for BPAL service. Compliance with the Act necessitates
16 an expeditious approach to this matter which, in turn, requires a major "initial" reduction in BPAL
17 charges and a subsequent clarification of Commission Decision No. 60635 limited to
18 engineering/investment parameters so that a proper "final" step can be soon taken. Thereafter, and
19 to the extent deemed warranted, the Commission may wish to revisit capital cost and other aspects
20 of it Decision No. 60635. If and when such an event occurs, the Commission should also reconsider
21 the levelization process by which ACFs are currently determined.

22 23 **7.4 Levelized vs. Escalated ACFs**

24 **Q. WHAT DO YOU MEAN BY THE ACF LEVELIZATION PROCESS?**

25 **A.** As shown in Schedule 3A, the constant ACF of 19.95% is applicable to each year in the 20-
26 year service life of Buried Metal Cable. I have employed this levelization process because
27 Commission Decision No. 60635 does not take issue with the same constant levels of ACFs
28 exhibited in the calculations of USWC. However, this levelization process is inappropriate, as it
29 results in intergenerational cross-subsidies; i.e., the ACFs are too high in the early years of
30 investment service lives and too low in the later years.

1 No such temporal cross-subsidization occurs when ACFs are determined recognizing the
2 anticipated rates of inflation built into investor expectations underlying the nominal costs of debt and
3 equity used in ACF calculations. Each of the three sets of debt and equity costs in Schedule 3C of
4 Exhibit ___(MJI-2), such as the 7.09% and 12.40% found to be reasonable in Commission Decision
5 No. 60635, incorporate some annual rate of anticipated future inflation -- probably 2% to 3% given
6 the performance of the economy over the past several years.^{21/} Yet, the levelized ACF of 19.95%
7 in Schedule 3A for Buried Metal Cable incorporates an expectation of no (0.0%) future inflation,
8 which contradicts the capital cost findings that form the basis upon which the 19.95% ACF is
9 derived.

10 **Q. HOW SHOULD ACFs BE CALCULATED TO PROPERLY REFLECT THE INFLATION**
11 **EMBODIED IN CORRESPONDING CAPITAL COSTS?**

12 A. The contradiction and resulting intergenerational cross-subsidization inherent in levelized
13 ACFs can be remedied by calculating ACFs with the same temporal pattern that implicitly exists
14 within the corresponding nominal capital costs. For instance, suppose the expected annual rate of
15 inflation incorporated in the 7.09% (debt) and 12.40% (equity) costs determined as reasonable in
16 Commission Decision No. 60635 is 2.38%, as hypothesized in footnote^{21/} to my testimony.
17 Schedule 3D of Exhibit ___(MJI-2) shows the ACFs applicable to Buried Metal Cable necessary to
18 properly reflect the anticipation of 2.38% annual future inflation.

19 In contrast to the constant ACF of 19.95%, the "correct" Year 2000 ACF of 17.22% rises by
20 2.38% annually to produce after-tax equity cash flows that have an accumulated present value,
21 measured at the beginning of year 2000, equal to the equity financed portion (\$617.00) of the \$1,000
22 investment made at the beginning of the year 2000. These "correct" or escalated ACFs increase to
23 19.83% in 2006 and 20.31% in 2007, between which the switching point occurs; i.e., when the

^{21/} As reflected in the Capital Asset Pricing Model (CAPM) method of determining nominal equity costs, the difference in current yields on short (e.g., 30-day T-bills) and long-term (e.g., 10-year bonds) government debt is an approximate measure of the future annual inflation incorporated in investor expectations. Since the risk of default on each of these debt instruments is assumed to be zero, the difference in yields can be only attributable to anticipated future inflation. For example, if the 30-day T-bill yield is 5% and the 10-year bond yield is 7.5%, expected future inflation is 2.38%. This follows because any nominal capital cost or rate of return (r) can be expressed as $r = r^* + p + r^*p$, where r^* is the expected real rate of return and p is the expected rate for future inflation. The yield of 5% on 30-day T-bills is r^* , since these debt instruments pose no risk of capital loss due to inflation because of the short holding period. In the hypothetical example, accordingly, $7.5\% = 5\% + p + 5\%p$, such that these yields incorporate an anticipated future rate of inflation or $p = 2.38\%$.

1 escalated ACF equals the levelized ACF. Increases continue at 2.38% annually until the escalated
2 ACF reaches 26.30% in the final service life year of 2019.

3 **Q. IN VIEW OF YOUR REMARKS, DR. ILEO, WHY HAVE YOU PERFORMED TELRIC**
4 **STUDIES OF BPAL USING LEVELIZED ACFs?**

5 A. Unlike in the prior PAL case, I have not taken issue in this proceeding with the method by
6 which USWC calculates ACFs, even though it is incorrect and inconsistent with the capital costs in
7 Commission Decision No. 60635. This election reflects the need to apply Commission Decision
8 No. 60635 with as little controversy as possible so that steps can be soon taken by the Commission
9 to materially remove the unlawful subsidies in the BPAL charges of USWC. But at the same time,
10 the Commission should understand that the investment ACFs proposed by the APA in this case (i.e.,
11 those in Column (2) of Schedule 3) overstate the correct levels of currently applicable ACFs given
12 debt and equity costs in Commission Decision No. 60635.^{22/}

13 **7.5 Maintenance Parameters**

14 **Q. WHAT IS CONTAINED IN SCHEDULE 3E OF EXHIBIT ___(MJI-2)?**

15 A. Schedule 3E presents the plant and equipment maintenance factors employed in my TELRIC
16 studies to develop the levelized ACFs listed in Schedule 3 applicable to USWC's BPAL services.
17 These maintenance factors are compared in Schedule 3E to those used by USWC in its BPAL cost
18 studies.

19 **Q. PLEASE EXPLAIN THE DIFFERENCES IN MAINTENANCE FACTORS EXHIBITED IN**
20 **SCHEDULE 3E.**

21 A. The maintenance factors proposed by the APA follow strictly from Commission Decision
22 No. 60635 and from the RLCAP (Version 3.5) and SUM of USWC used in the prior PAL case. At
23 Page 14 of Commission Decision No. 60635, the finding is made that a "fifteen percent reduction"
24 from "US West's maintenance cost estimate" is "reasonable." The APA Proposed maintenance
25 factors listed in Column (2) of Schedule 3E, accordingly, represent 85% of the maintenance factors
26 used by USWC in the previous PAL case as then incorporated in its loop and switching models.

^{22/} If escalated rather than levelized ACFs were employed in my TELRIC studies, along with interpretations of Commission Decision No. 60635 regarding easy/difficult placement ratios and feeder fills, the statewide loop and drop cost component for USWC's flat rate BPAL service would decline to about \$13.00 per month.

1 With respect to the USWC Proposed maintenance factors in Column (1) of Schedule
2 3E, their derivation is not contained in the electronic file provided by USWC in connection with its
3 BPAL cost studies in this proceeding. As implicitly indicated in Schedule 3E, USWC has
4 significantly increased maintenance factors from prior levels for many plant and equipment accounts.
5 Most noticeable in this regard are the maintenance factor for Aerial Metal Cable (****% to ****%),
6 UG Metal Cable (from ****% to ****%), Buried Metal Cable (from ****% to ****%), and Digital
7 Switching Equipment (from ****% to ****%). The former figures in these comparisons represent
8 the maintenance factors in Column (2) of Schedule 3E times (1/85%).

9 While the basis of the new maintenance factors of USWC in Column (1) is presently
10 unknown, it has no relevance within the context of this proceeding. More specifically, as with other
11 TELRIC study economic/financial input values deemed to be reasonable in Commission Decision
12 No. 60635, USWC should not be permitted to alter these findings at this time. The conflict between
13 USWC's use of its \$21.98 monthly UNE rate for statewide 2-wire loops as the loop and drop cost
14 component of BPAL service, while attempting to increase the input values underlying the other cost
15 components of BPAL service, is again apparent.

16 **8.0 APA Proposed Recurring and Nonrecurring BPAL Charges**

17 **Q. DOES EXHIBIT ___(MJI-2) CONTAIN A SCHEDULE SHOWING THE BPAL RATES OF**
18 **USWC PROPOSED BY THE APA IN THIS PROCEEDING?**

19 **A.** Yes. All of the recurring and nonrecurring Arizona tariffs recommended by the APA as an
20 "initial" step in bringing USWC's BPAL charges into compliance with the Act are presented in
21 Schedule 4 in comparison to those proposed by USWC. As discussed earlier in my testimony, the
22 recurring Arizona charge for flat rate BPAL service should be lowered from the \$42.31 proposed by
23 USWC to \$21.80 per month as a start in removing unlawful subsidies. Corresponding to this 48.5%
24 decrease, the APA further recommends that USWC's recurring Arizona charges for measured rate
25 BPAL access and usage be reduced by 53.3% on an across the board "initial" basis. This decrease

1 serves to remove significant (but not all) unlawful subsidies and to maintain rate relationships both
2 within and among charges for measured and flat rate BPAL.^{23/}

3 The other BPAL rate reductions in Schedule 4 proposed by the APA range from 36% to 80%.
4 These pertain to the recurring and nonrecurring charges of USWC for fraud protection services
5 provided to BPAL subscribers, as well as nonrecurring charges related to initial payphone
6 connections and subsequent premise visits.

7 **8.1 Fraud Protection Rates**

8 **Q. PLEASE DESCRIBE THE BASIS FOR THE APA PROPOSED FRAUD PROTECTION** 9 **CHARGES IN SCHEDULE 4.**

10 A. Fraud protection is a BPAL service provided by USWC to "smart" payphones Owned and
11 operated by APA members, which is listed in USWC's Arizona tariffs as prohibiting "direct dialed
12 local or inter/intraLATA toll calls when provided out of a cross-bar or stored program control office"
13 such that "payphone users will be restricted to placing calling card, bill to third number an collect
14 calls only." The BPAL cost studies of USWC in this case, however, do not contain determinations
15 that specifically relate to fraud protection. Thus, USWC has not even attempted to establish the
16 reasonableness of its proposed recurring (\$2.50 per month) and nonrecurring (\$15.00) charges for
17 fraud protection. The latter applies if fraud protection is installed subsequent to an initial "smart"
18 payphone connection.

19 In response to discovery regarding these matters, USWC suggests that other vertical
20 services provided to non-BPAL subscribers are similar to fraud protection.^{24/} Accordingly, I have

^{23/} In conjunction with the complete removal of unlawful subsidies from USWC's BPAL charges, presumably before mid-2001, consideration also should be given to whether a tariff redesign is needed at the lower and geographically deaveraged rates, such as with respect to the 575 monthly call allowance. The bringing of USWC's PAL rates into full compliance with the Act must further necessarily extend to SPAL, which is primarily used internally by USWC for its retail rendering of payphone service in competition with APA members.

^{24/} While USWC has not provided any cost studies for BPAL fraud protection services, USWC's response to APA 06-028 (a) discusses functional equivalencies such as between "Outgoing Fraud Protection" and "Qwest's CustomNet service." USWC further suggests there are functional similarities between call screening service and fraud protection service, as reflected by the statement in response to APA 06-028 (c) that, while "incoming and outgoing call screening capabilities of a Smart PAL are technically different than Incoming and Outgoing Fraud Protection," the "outgoing screening capability provided via Fraud Protection or CustomNet accomplishes the same thing as ANI ii on a Smart PAL."

1 utilized the results of USWC's cost studies applicable to these other vertical services as proxies for
2 the recurring and nonrecurring costs of fraud protection. With respect to the former, USWC implies
3 that fraud protection is similar to vertical services rendered pursuant to its CustomNet tariff --
4 particularly with respect to outgoing call screening functions therein. Accordingly, I have employed
5 the direct and shared investment per call amounts shown in USWC's recurring cost study for
6 CustomNet, along with the corresponding ACFs proposed by the APA and a 15% common cost
7 factor, to establish a recurring cost per call applicable to fraud protection. Given that USWC reports
8 an average monthly volume of about *** calls applicable to flat rate BPAL, I calculate that the
9 recurring cost of fraud protection at this calling volume is ****¢ per month.

10 **Q. HOW HAVE YOU APPLIED THE RECURRING COST CALCULATED FOR FRAUD**
11 **PROTECTION?**

12 A. A recurring cost of ****¢ relates to outgoing calls at a level of about *** per month per
13 payphone. Since the calling volume reported by USWC for measured rate BPAL is about *** calls
14 per month, the corresponding recurring cost applicable to measured rate BPAL service per payphone
15 is ***¢ per month.

16 On the other hand, and while the likelihood of any significant volume is small, some
17 provision should be made for incoming fraud protection. Proceeding cautiously in this regard, I have
18 doubled the amounts cited above, which produce recurring costs of about ***¢ per month applicable
19 to flat rate BPAL service and ***¢ per month applicable to measured rate BPAL. With additional
20 (perhaps too extreme) caution, I propose that USWC's recurring charge for fraud protection be
21 lowered from \$2.50 to \$1.00 per month at this time for both flat and measured rate BPAL. I further
22 recommend that this \$1.00 recurring charge remain in effect until results are known from the BPAL-
23 specific cost studies of USWC performed pursuant to the Commission's clarification of its Decision
24 No. 60635.

25 **Q. DID YOU TAKE A SIMILAR APPROACH FOR THE NONRECURRING FRAUD**
26 **PROTECTION CHARGE PROPOSED BY THE APA?**

27 A. Yes. The nonrecurring fraud protection charge that I recommend of \$3.00, as contrasted with
28 the \$15.00 proposed by USWC, rests on results contained in USWC's cost studies regarding the
29 implementation of Call Screening Restriction services provided to residential and business
30 customers. Even though my costing procedure likely serves to greatly overstate the costs applicable

1 to fraud protection, the \$3.00 charge is based on a common cost provision (15%) added to the
2 average direct costs shown in USWC's Call Screening Restriction cost studies for residential and
3 business subscribers.

4 **Q. WHY DO YOU SAY THAT A \$3.00 CHARGE LIKELY SERVES TO GREATLY**
5 **OVERSTATE THE NONRECURRING COST OF FRAUD PROTECTION?**

6 A. A vast difference is shown in USWC's studies for the direct cost of rendering Call Screening
7 Restriction services to residence as contrasted with business customers -- the former is about eight
8 times greater than the latter. A significant portion of this difference is attributable to time spent by
9 USWC employees in explaining the services embodied in Call Screening Restriction to residential
10 subscribers. Much of this time is not likely to be required in explaining fraud protection to owners
11 and operators of "smart" payphones.

12 However, again erring on the side of caution, I propose a \$3.00 (instead of \$15.00)
13 nonrecurring charge for fraud protection. Undoubtedly, a further substantial reduction to remove
14 unlawful subsidies will be necessary once the results of USWC's PAL-specific cost studies are
15 known.

16 **8.2 Connection Rates**

17 **Q. HOW DID YOU DEVELOP THE NONRECURRING ACCESS LINE CHARGES FOR**
18 **BPAL IN SCHEDULE 4?**

19 A. Again, USWC has provided no cost studies applicable to connecting payphones or to other
20 payphone premise visits. I have used, accordingly, the average of the direct cost results shown in
21 the nonrecurring cost studies of USWC applicable to Residence (\$****) and Business (\$****)
22 Access Lines, plus a common cost provision of 15%. The averaging of these two amount reflects
23 that payphone connections are likely to be less costly than business connections (as these include
24 complex business), but perhaps more costly than residential connections. The average of the two
25 is \$****, which rises to \$**** when loaded at 15% for common costs. Thus, the APA Proposed
26 nonrecurring charge for payphone connections in \$36.00 as contrasted with the \$56.00 proposed by
27 USWC.

1 With respect to other visits to payphone locations by USWC technicians, my recommended
2 nonrecurring rates of \$17.50 is the product of ratios exhibited in Schedule 4. That is, the ratio of the
3 USWC Proposed other charge (\$27.50) to the USWC Proposed initial charge (\$56.00) times the
4 APA Proposed initial charge of \$27.50. The relationship between the \$17.50 and \$27.50 is the same,
5 therefore, as that incorporated in the proposed nonrecurring BPAL rates of USWC.
6

7 **8.3 Second Set Rate Recommendations**

8 **Q. WHAT IS SHOWN IN SCHEDULE 4A OF EXHIBIT __ (MJI-2)?**

9 A. Schedule 4A presents my Arizona tariffed rate recommendations for the statewide BPAL
10 services of USWC in the event that the burdens of this proceeding prohibit clarification of the
11 engineering/investment parameters in Commission Decision No. 60635 and, hence, make the timing
12 of the "final" step removal of unlawful subsidies unknown. Other than for recurring charges
13 applicable to flat and measured rate BPAL, Schedule 4A is identical to Schedule 4.

14 The recurring BPAL rates in Schedule 4A shown as APA Proposed are based on the USWC
15 Restated total monthly costs previously described in my testimony; i.e., \$24.70 for flat rate BPAL
16 and \$23.37 for measured rate BPAL on a statewide basis. These "second" set rate recommendations
17 have been developed in a manner analogous to that in Schedule 4, but additionally take into account
18 that BPAL subscribers will be paying \$11.61 each month to USWC per payphone line for the
19 EUCLC and PICC. With respect to flat rate BPAL statewide, for instance, the sum of the Arizona
20 recurring rate of \$13.09 and the Federal monthly payment of \$11.61 equals the USWC Restated cost
21 of \$24.70 per month. As discussed earlier in my testimony, the \$24.70 is the result of applying the
22 RLCAP and other costing models of USWC, including the engineering/investment input values
23 therein, in conjunction with the economic/financial parameters in Commission Decision No. 60635
24 and with statewide PAL-specific loop and usage data.

25 **9.0 Summary of Testimony**

26 **Q. PLEASE SUMMARIZE YOUR TESTIMONY, DR. ILEO.**

1 A. In violation of Section 276 of the Act, significant subsidies are embedded in the BPAL rates
2 of USWC in Arizona. An important "initial" step in removing these unlawful subsidies consists of
3 a set of reductions in the Arizona tariffed flat and measured rate BPAL charges of USWC ranging
4 from 36% to 80% statewide. The new BPAL charges of USWC that result from these reductions
5 will continue to cross-subsidize USWC's other services, however, not only because they do not fully
6 reflect properly determined costs, but further because an additional \$11.37 per month (soon
7 increasing to \$11.61) will be paid by BPAL subscribers for the Federal EUCLC and PICC.

8 In order to bring the BPAL and SPAL rates of USWC into full compliance with mandates
9 of the Act, the engineering/investment parameters in Commission Decision No. 60635 require
10 clarification as to their meaning within the specific context of the RLCAP, SUM, and other costing
11 models of USWC. A recent Federal Court ruling makes clear that, pursuant to the Act, such "actual"
12 rather than "hypothetical" models must be used in the costing of the services rendered by ILECs.
13 Upon this specification of engineering/investment parameters, USWC should apply its costing
14 models incorporating BPAL and SPAL-specific loop, usage, and other data on a geographically
15 deaveraged basis, as well as the presently specified economic/financial input values and the clarified
16 engineering/investment input values in Commission Decision No. 60635.

17 An order should be issued by the Commission prior to the conclusion of this case clarifying
18 its Decision No. 60635 and requiring the PAL-specific cost studies outlined above to be performed
19 by USWC within 60 days. The results of these cost studies, including necessary tests to ensure that
20 their calculation complies with the Commission's order, should be considered in a concurrent
21 proceeding no later than 60 days thereafter in relation to determining "final" step PAL rates that fully
22 remove unlawful subsidies. Until this occurs, whereby USWC's PAL charges properly comply with
23 the Act, consideration of USWC's requests for pricing flexibility and geographic deaveraging should
24 be deferred.

25 To the extent that the "initial" and "final" step procedures that I propose are not adopted in
26 this proceeding, a second set of APA recommendations is offered for the consideration of the
27 Commission. These largely involve further Arizona recurring tariff reductions than in the "initial"
28 step for statewide flat rate BPAL (a lowering by 69.1% vs. 48.5%) and for the statewide access and
29 usage elements of measured rate BPAL (a lowering by 75.9% vs. 53.3%). While these "second" set
30 reductions are not based on the same level of appropriateness anticipated under my proposed "initial"

1 and "final" step procedures, they will serve to remove unlawful subsidies until more accurate
2 determinations are made pursuant to Section 276 of the Act.

3 **Q. HAVE YOU COMPLETED YOUR DIRECT TESTIMONY.**

4 **A. Yes.**

**COMPARISON OF USWC AND APA DETERMINED TOTAL RECURRING COSTS
STATEWIDE FLAT RATE BPAL SERVICE**

	(1)	(2)	(3)	(4)	(5)	(6)
	Investment Related Costs		Direct	Other	Common	Total
	Direct	Shared	Expenses	Expenses	Costs	Costs
USWC Proposed 1/						
Loop & Drop	N/A	N/A	N/A	N/A	N/A	\$21.9800
NTS-COE	****	****	****	****	****	****
Billing & Collection	****	****	****	****	****	****
Directory Listing	****	****	****	****	****	****
Usage	****	****	****	****	****	****
Total						\$****
USWC Restated						
Loop & Drop 2/	N/A	N/A	N/A	N/A	N/A	\$19.8756
NTS-COE 3/	****	****	****	0.0000	****	****
Billing & Collection 4/	****	****	****	0.0000	****	****
Directory Listing 5/	****	****	****	0.0000	****	****
Usage 6/	****	****	****	\$0.0000	****	****
Total						\$24.6975
APA Proposed						
Loop & Drop 7/	****	****	****	\$0.0000	****	\$16.9824
NTS-COE 3/	****	****	****	0.0000	****	****
Billing & Collection 4/	****	****	****	0.0000	****	****
Directory Listing 5/	****	****	****	0.0000	****	****
Usage 6/	****	****	****	\$0.0000	****	****
Total						\$21.8073

N/A means not applicable due to the use of Total Costs.

Footnotes 1/ through 7/ per Page 2.

COMPARISON OF USWC AND APA DETERMINED TOTAL RECURRING COSTS
STATEWIDE FLAT RATE BPAL SERVICE
(FOOTNOTES)

-
- 1/ Per USWC electronic file AZRDCN20002958.xls, Tabs WINPC3 Output (INT) and WINPC3-Study Summary.
- 2/ Calculated as \$**** for Direct & Shared loop and drop investment applicable to USWC's statewide PAL loops per Schedule 1A divided by comparable figure of \$**** for the composite of USWC's statewide loops times \$21.98.
- 3/ Calculated as follows:
- \$**** for Direct Investment = Investment (\$****) per file in 1/, Tab Inputs, times ACF of 23.9200% for FRC 377C per Schedule 3 divided by 12.
 - \$**** for Shared Investment = Investment (\$****) times ***% Building factor per file in 1/, Tab WINPC3 ACF Outputs, times ACF of 17.1579% for FRC 10C per Schedule 3 divided by 12 plus \$**** times ****% Land factor per file in 1/, Tab WINPC3 ACF Outputs, times ACF of 19.8232% for FRC 20C per Schedule 3 divided by 12.
 - \$**** for Direct Expenses reflects acceptance of USWC Proposed amount.
 - \$0.0000 for Other Expenses reflects replacement of USWC Proposed amount per Commission Decision No. 60635.
 - \$**** for Common Costs = Sum of amounts in Columns (1) through (4) times common cost factor or 15% per Commission Decision No. 60635.
- 4/ Calculated as follows:
- \$**** for Direct Investment = Investment (\$****) per file in 1/, Tab Inputs, times ACF of 25.0691% for FRC 361C per Schedule 3 divided by 12.
 - \$**** for Shared Investment and \$**** for Direct Expenses reflects acceptance of USWC Proposed amounts.
 - \$0.0000 for Other Expenses reflects replacement of USWC Proposed amounts per Commission Decision No. 60635.
 - \$**** for Common Costs = Sum of amounts in Columns (1) through (4) times common cost factor or 15% per Commission Decision No. 60635.
- 5/ Calculated as follows:
- \$**** for Direct & Shared Investment reflects acceptance of USWC Proposed amounts.
 - \$**** for Direct Expenses reflects acceptance of USWC Proposed amount.
 - \$0.0000 for Other Expenses reflects replacement of USWC Proposed amount per Commission Decision No. 60635.
 - \$**** for Common Costs = Sum of amounts in Columns (1) through (4) times common cost factor of 15% per Commission Decision No. 60635.
- 6/ Calculated as follows:
- Direct & Shared Investment per Page 3 times corresponding ACFs per Schedule 3 divided by 12.
 - \$**** for Direct Expenses reflects acceptance of USWC Proposed amounts.
 - \$0.0000 for Other Expenses reflects replacement of USWC Proposed amounts per Commission Decision No. 60635.
 - \$**** for Common Costs = Sum of amounts in Columns (1) through (4) times common cost factor of 15% per commission Decision No. 60635.
- 7/ Calculated as follows:
- Direct & Shared Investment per Schedule 1A.
 - \$**** for Common Costs = Sum of amounts in Columns (1) through (4) times common cost factor of 15% per Commission Decision No. 60635.
-

**COMPARISON OF USWC AND APA DETERMINED TOTAL RECURRING COSTS
STATEWIDE FLAT RATE BPAL SERVICE
(FOOTNOTE 6/)**

Plant & Equipment Description	Field Reporting Code (FRC)	(1) USWC Proposed	(2) Usage Investment	(3) a/
		Direct	Shared Building	Shared Land
Conduit	4C	\$****	\$****	\$****
UG Metal Cable	5C	****	****	****
UG Non-Metal Cable	85C	****	****	****
Operator Systems	117C	****	**** b/	**** c/
Circuit Equipment	257C	****	**** d/	**** e/
Subscriber Pair Gain	257CS	****	**** d/	**** e/
Circuit Equipment - Other	357C	****	**** d/	**** e/
Circuit - Other (SONET)	357CS	****	**** d/	**** e/
General Purpose Computers	361C	****	****	****
Digital Switching Equip.	377C	****	**** b/	**** c/
Buried Non-Metal Cable	845C	****	****	****
Total		\$****	\$****	\$****

a/ Per source in footnote 1/ on Page 1 of Schedule 1, reflecting the following shared factors times Column (1):

b/ **%; c/ **%; d/ **%; and e/ **%.

APA PROPOSED LOOP AND DROP RECURRING COST COMPONENT
STATEWIDE FLAT RATE BPAL SERVICE

Plant Description	Field Reporting Code (FRC)	(1)	(2)	(3)	(4)	(5)
		Required Investment		Annual Cost Factor (ACF)	Recurring Monthly Cost	
		Direct	Shared		Direct	Shared
Poles	1C	\$****	\$****	15.03%	\$****	\$****
Aerial Metal Cable	52C	****	****	21.80%	****	****
Aerial Wire	3C	****	****	21.59%	****	****
Conduit	4C	****	****	13.20%	****	****
UG Metal Cable	5C	****	****	19.61%	****	****
Buried Metal Cable	45C	****	****	19.95%	****	****
Building Cable	62C	****	****	12.83%	****	****
UG Non-Metal Cable	85C	****	****	16.94%	****	****
Subscriber Pair Gain	257C	****	****	19.66%	****	****
Buried Non-Metal Cable	845C	****	****	16.64%	****	****
Building Non-Metal Cable	862C	****	****	16.11%	****	****
Building	110C	****	****	17.16%	****	****
Land	20C	****	****	19.82%	****	****
Buried Drop	35C	****	****	26.63%	****	****
Aerial Drop	42C	****	****	34.99%	****	****
Total		\$****	\$****		\$****	\$****

1/ Per RLCAP Version 3.5 (See Schedule 1B) applied using electronic PAL loop files designated by USWC as AZVSPL.xls, AZSMPL.xls, AZMDPL.xls, and AZLGPL.xls, where these acronyms refer to PAL loops (PL) in Arizona (AZ) very small (VS), small (SM), medium (MD), and large (LG) wire centers.

2/ Per Schedule 3.

3/ Columns (1) or (2) times Column (3)/12 as applicable.

Exhibit__ (MJI-2)
Schedule 1B
Page 1 of 15

****NON-CONFIDENTIAL VERSION****

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Page 15 of 15

**COMPARISON OF USWC AND APA DETERMINED TOTAL RECURRING COSTS
STATEWIDE MEASURED RATE BPAL SERVICE 1/**

	(1)	(2)	(3)	(4)	(5)	(6)
	Investment Related Costs		Direct Expenses	Other Expenses	Common Costs	Total Costs
	Direct	Shared				
USWC Proposed						
Loop & Drop	N/A	N/A	N/A	N/A	N/A	\$21.9800
NTS-COE	****	****	****	****	****	****
Billing & Collection	****	****	****	****	****	****
Directory Listing	****	****	****	****	****	****
Usage	****	****	****	****	****	****
Total						****
USWC Restated						
Loop & Drop	N/A	N/A	N/A	N/A	N/A	\$19.8756
NTS-COE	****	****	****	0.0000	****	****
Billing & Collection	****	****	****	0.0000	****	****
Directory Listing	****	****	****	0.0000	****	****
Usage 2/	****	****	****	\$0.0000	****	****
Total						\$23.3664
APA Proposed						
Loop & Drop	\$14.7342	\$0.0331	\$0.0000	\$0.0000	\$2.2151	\$16.9824
NTS-COE	****	****	****	0.0000	****	****
Billing & Collection	****	****	****	0.0000	****	****
Directory Listing	****	****	****	0.0000	****	****
Usage 2/	****	****	****	\$0.0000	****	****
Total						\$19.9453

1/ Same references and/or calculations cited in footnotes on Pages 1 and 2 of Schedule 1, except for footnote 6/ which is replaced by footnote 2/ herein.

2/ Calculated as follows:

- Direct & Shared Investment per Page 2 times corresponding ACFs per Schedule 3 divided by 12.
- \$**** for Direct Expenses reflects replacement of USWC Proposed amount due to what appears as an unwarranted (if not erroneous) additional provision for Billing & Collection costs.
- \$0.000 for Other Expenses reflects replacement of USWC Proposed amount per Commission Decision No. 60635.
- \$**** for Common Costs = Sum of amounts in Columns (1) through (4) times common cost factor of 15% per Commission Decision No. 60635.

**COMPARISON OF USWC AND APA DETERMINED TOTAL RECURRING COSTS
STATEWIDE MEASURED RATE PAL SERVICE
(FOOTNOTE 2/)**

Plant & Equipment Description	Field Reporting Code (FRC)	(1)	(2)	(3)
		USWC Proposed Investment <u>a/</u>		
		Direct	Shared Building	Shared Land
Conduit	4C	\$****	\$****	\$****
UG Metal Cable	5C	****	****	****
UG Non-Metal Cable	85C	****	****	****
Operator Systems	117C	****	**** <u>b/</u>	**** <u>c/</u>
Circuit Equipment	257C	****	**** <u>d/</u>	**** <u>e/</u>
Subscriber Pair Gain	257CS	****	**** <u>d/</u>	**** <u>e/</u>
Circuit Equipment - Other	357C	****	**** <u>d/</u>	**** <u>e/</u>
Circuit - Other (SONET)	357CS	****	**** <u>d/</u>	**** <u>e/</u>
General Purpose Computers	361C	****	****	****
Digital Switch	377C	****	**** <u>b/</u>	**** <u>c/</u>
Buried Non-Metal Cable	845C	****	****	****
Total		\$****	\$****	\$****

a/ Per source in footnote 1/ on Page 1 of Schedule 1, reflecting the following shared factors times Column (1):

b/ **%; c/ **%; d/ **%; and e/ **%.

COMPARISON OF MEASURED RATE BPAL MONTHLY BILLS
UNDER USWC PROPOSED AND APA PROPOSED ARIZONA TARIFFS

(1) Monthly Calls	(2) Options (A) & (C)		(3) Options (A) & (C)		(4) Options (A) & (D)		(5) Options (B) & (C)		(6) Options (B) & (C)		(7) Options (B) & (C)		(8) Options (B) & (D)		(9) Options (B) & (D)	
	USWC	Proposed	USWC	Proposed	USWC	Proposed	USWC	Proposed	USWC	Proposed	USWC	Proposed	USWC	Proposed	USWC	Proposed
300	\$38.51	\$18.00	\$38.51	\$18.00	\$38.51	\$18.00	\$41.16	\$19.22	\$41.16	\$19.22	\$35.81	\$16.72	\$35.81	\$16.72	\$35.81	\$16.72
350	38.51	18.00	38.51	18.00	38.51	18.00	45.16	21.09	45.16	21.09	38.91	18.17	38.91	18.17	38.91	18.17
400	38.51	18.00	38.51	18.00	38.51	18.00	49.16	22.96	49.16	22.96	42.02	19.63	42.02	19.63	42.02	19.63
450	38.51	18.00	38.51	18.00	38.51	18.00	53.16	24.83	53.16	24.83	45.13	21.08	45.13	21.08	45.13	21.08
500	38.51	18.00	38.51	18.00	38.51	18.00	57.16	26.70	57.16	26.70	48.24	22.54	48.24	22.54	48.24	22.54
550	38.51	18.00	38.51	18.00	38.51	18.00	61.16	28.57	61.16	28.57	51.34	23.99	51.34	23.99	51.34	23.99
600	40.51	18.94	40.06	18.73	40.06	18.73	65.16	30.44	65.16	30.44	54.45	25.44	54.45	25.44	54.45	25.44
650	44.51	20.81	43.17	20.19	43.17	20.19	69.16	32.31	69.16	32.31	57.56	26.90	57.56	26.90	57.56	26.90
700	48.51	22.68	46.29	21.64	46.29	21.64	73.16	34.18	73.16	34.18	60.67	28.35	60.67	28.35	60.67	28.35
750	\$52.51	\$24.55	\$49.39	\$23.09	\$49.39	\$23.09	\$77.16	\$36.05	\$77.16	\$36.05	\$63.77	\$29.80	\$63.77	\$29.80	\$63.77	\$29.80

1/ 575 Monthly Call Allowance (A) & Monthly Calls (C) Options.

USWC Proposed = $\$38.51 + [(1) - 575](8\phi)$ after 575 calls.

APA Proposed = $\$18.00 + [(1) - 575](3.74\phi)$ after 575 calls.

2/ 575 Monthly Call Allowance (A) & Minutes Per Call (D) Options.

USWC Proposed = \$**** calls.

APA Proposed = \$**** calls.

3/ No Monthly Call Allowance (B) & Monthly Calls (C) Options.

USWC Proposed = $\$17.16 + (1)(8\phi)$.

APA Proposed = $\$8.00 + (1)(3.74\phi)$.

4/ Monthly Call Allowance (B) & Minutes Per Call (D) Options.

USWC Proposed = \$****.

APA Proposed = \$****.

**COMPARISON OF USWC PROPOSED AND APA PROPOSED
COST STUDY ECONOMIC/FINANCIAL PARAMETERS
ANNUAL COST FACTORS (ACFS)**

Plant & Equipment Description	Field Reporting Code (FRC)	(1) USWC Proposed <u>1/</u>	(2) APA Proposed <u>2/</u>
Poles	1C	****	15.03%
Aerial Metal Cable	52C	****	21.80%
Aerial Wire	3C	****	21.59%
Conduit	4C	****	13.20%
UG Metal Cable	5C	****	19.61%
Buried Metal Cable	45C	****	19.95%
Building Cable	62C	****	12.83%
UG Non-Metal Cable	85C	****	16.94%
Operator Systems	117C	****	29.00%
Circuit Equipment	257C	****	19.66%
Subscriber Pair Gain	257CS	****	19.66%
Circuit Equipment - Other	357C	****	19.79%
Circuit - Other (SONET)	357CS	****	19.79%
General Purpose Computers	361C	****	25.07%
Digital Switching Equip.	377C	****	23.92%
Buried Non-Metal Cable	845C	****	16.64%
Building Non-Metal Cable	862C	****	16.11%
Building	110C	****	17.16%
Land	20C	****	19.82%
Buried Drop	35C	****	26.63%
Aerial Drop	42C	****	34.99%

1/ Per USWC electronic file AZRDCN20002958.xls, Tab WINPC3 ACF Outputs.

2/ Calculated using methodology illustrated in Schedule 3A with respect to Buried Metal Cable (FRC 45C).

Exhibit (MJI-2)
Schedule 3A

ILLUSTRATION OF APA PROPOSED ACF DETERMINATIONS
PER \$1,000 OF BURIED METAL CABLE INVESTMENT (FRC 45C)

Year	(1) Required Cash Receipts	(2) Before Tax 1/ Cash Expenses	(3) Tax 2/ Depreciation	(4) Taxable Income 3/ (1) - (2) - (3)	(5) Income Taxes (4) x 39.7%	(6) Total Net Cash Flow 4/ (1) - (2) - (5)	(7) Debt Retirement 5/ (6) - (7)	(8) Equity Cash Flow (6) - (7)	(9) Equity Present Value Factor 6/	(10) Present Value Annual (8) / (9)	(11) Cash Flow Accumulated (10) / (9)
2000	\$199.46	\$83.55	\$50.00	\$65.91	\$26.17	\$89.74	\$19.15	\$70.59	1.06	\$66.59	\$66.59
2001	\$199.46	\$82.20	\$95.00	\$22.27	\$8.84	\$108.43	\$19.15	\$89.28	1.19	\$74.92	\$141.50
2002	\$199.46	\$80.84	\$85.50	\$33.12	\$13.15	\$105.47	\$19.15	\$86.32	1.34	\$64.45	\$205.95
2003	\$199.46	\$79.48	\$77.00	\$42.98	\$17.06	\$102.92	\$19.15	\$83.77	1.51	\$55.64	\$261.59
2004	\$199.46	\$78.12	\$69.30	\$52.04	\$20.66	\$100.68	\$19.15	\$81.53	1.69	\$48.18	\$309.77
2005	\$199.46	\$76.77	\$62.30	\$60.40	\$23.98	\$98.72	\$19.15	\$79.57	1.90	\$41.83	\$351.61
2006	\$199.46	\$75.41	\$59.00	\$65.05	\$25.83	\$96.23	\$19.15	\$79.08	2.14	\$36.99	\$388.60
2007	\$199.46	\$74.05	\$59.00	\$66.41	\$26.37	\$95.05	\$19.15	\$79.90	2.40	\$33.25	\$421.85
2008	\$199.46	\$72.69	\$59.10	\$67.67	\$26.87	\$93.91	\$19.15	\$80.76	2.70	\$29.90	\$451.74
2009	\$199.46	\$71.34	\$59.00	\$69.13	\$27.44	\$92.68	\$19.15	\$81.53	3.04	\$26.86	\$478.60
2010	\$199.46	\$69.98	\$59.10	\$70.39	\$27.94	\$91.54	\$19.15	\$82.39	3.41	\$24.15	\$502.75
2011	\$199.46	\$68.62	\$59.00	\$71.84	\$28.52	\$90.32	\$19.15	\$83.17	3.84	\$21.69	\$524.43
2012	\$199.46	\$67.26	\$59.10	\$73.10	\$29.02	\$89.18	\$19.15	\$84.03	4.31	\$19.49	\$543.92
2013	\$199.46	\$65.90	\$59.00	\$74.56	\$29.60	\$87.96	\$19.15	\$84.81	4.85	\$17.50	\$561.43
2014	\$199.46	\$64.55	\$59.10	\$75.82	\$30.10	\$86.82	\$19.15	\$85.67	5.45	\$15.73	\$577.16
2015	\$199.46	\$63.19	\$59.50	\$77.17	\$30.64	\$85.67	\$19.15	\$86.53	6.12	\$12.21	\$589.36
2016	\$199.46	\$61.83	\$60.00	\$78.51	\$31.18	\$84.51	\$19.15	\$87.38	6.88	\$9.28	\$598.64
2017	\$199.46	\$60.47	\$60.00	\$79.85	\$31.72	\$83.35	\$19.15	\$88.23	7.73	\$8.36	\$607.00
2018	\$199.46	\$59.12	\$60.00	\$81.19	\$32.26	\$82.19	\$19.15	\$89.08	8.69	\$7.53	\$614.53
2019	\$199.46	\$127.76	\$60.00	\$71.71	\$28.47	\$43.24	\$19.15	\$24.09	9.77	\$2.47	\$617.00

$$\text{LEVELIZED ACF} = (\$199.46 / \$1,000.00) = 19.95\%$$

1/ Constant level of annual cash flows needed to produce the results in Column (11) at the end of year 19 for this 20-year service life per Schedule 3B; i.e. the accumulated present value of the annual equity cashflows, when discounted at the equity cost of 12.40% per Schedule 3C to the beginning of the year 2000, equals the 61.70% equity financed portion per Schedule 3B of the original \$1,000 investment made at the beginning of the year 2000.

2/ Includes annual interest expense of 7.09% per Schedule 3C times the outstanding (unretired) balance of the 38.30% debt financed portion per Schedule 3C of the original \$1,000 investment, ad valorem expense of 4.44% per Schedule 3C times \$1,000, maintenance expense of 4.44% per Schedule 3D times \$1,000, and for only the year 2019, net salvage of -7% per Schedule 3B times the original investment of \$1,000.

3/ Per allowed rates for income tax purposes applicable to 15-year property under the Modified Accelerated Cost Recovery System (MACRS).

4/ Combined state and federal income tax rate per Schedule 3C.

5/ Debt financed portion (38.30%) per Schedule 3C of the original \$1,000 investment ratably retired over 20 years per Schedule 3B.

6/ Discount factor using mid-year convention, calculated as $(1 + 12.40\%)^{i-5}$, where $i = 1$ for the year 2000 to $i = 20$ for the year 2019.

Exhibit___(MJI-2)
Schedule 3B

**COMPARISON OF USWC PROPOSED AND APA PROPOSED
COST STUDY ECONOMIC/FINANCIAL PARAMETERS
INVESTMENT SERVICE LIFE AND NET SALVAGE VALUES**

Plant & Equipment Descripti	Field Reporting Code (FRC)	(1) USWC Proposed 1/		(3) APA Proposed 2/	
		Service Life (Years)	Net Salvage (Percent)	Service Life (Years)	Net Salvage (Percent)
Poles	1C	****	****	26.0	-49.0%
Aerial Metal Cable	52C	****	****	14.0	-26.0%
Aerial Wire	3C	****	****	15.0	-32.0%
Conduit	4C	****	****	60.0	-11.0%
UG Metal Cable	5C	****	****	15.0	13.0%
Buried Metal Cable	45C	****	****	20.0	-7.0%
Building Cable	62C	****	****	20.0	-12.0%
UG Non-Metal Cable	85C	****	****	20.0	-21.0%
Operator Systems	117C	****	****	5.0	3.0%
Circuit Equipment	257C	****	****	10.0	3.0%
Subscriber Pair Gain	257CS	****	****	10.0	3.0%
Circuit Equipment - Other	357C	****	****	10.0	3.0%
Circuit - Other (SONET)	357CS	****	****	10.0	3.0%
General Purpose Computers	361C	****	****	6.0	5.0%
Digital Switching Equip.	377C	****	****	10.0	3.0%
Buried Non-Metal Cable	845C	****	****	20.0	-9.0%
Building Non-Metal Cable	862C	****	****	20.0	-33.0%
Building	110C	****	****	50.0	-10.0%
Land	20C	****	****	100.0	99.9%
Buried Drop	35C	****	****	18.5	-7.0%
Aerial Drop	42C	****	****	14.0	-26.0%

1/ Per Confidential Attachment A to USWC response to APA Data Request 05-006.

2/ Per Commission Decision No. 60635 (pgs. 9 and 10), which accepted the service life and net salvage values in a study performed by Technology Futures, Inc. (TFI) for USWC.

Exhibit (MJI-2)
Schedule 3C

**COMPARISON OF USWC PROPOSED AND APA PROPOSED
COST STUDY ECONOMIC/FINANCIAL PARAMETERS
CAPITAL COSTS AND TAX RATES**

	(1)	(2)	(3)
	USWC Proposed		APA
	Cost Study	Rev. Req.	Proposed
	Purposes 1/	Purposes 2/	Cost Study
			Purposes 3/
<u>Capital Costs</u>			
Debt Ratio	****	47.60%	38.30%
Debt Cost	****	7.39%	7.09%
Equity Ratio	****	52.40%	61.70%
Equity Cost	****	14.00%	12.40%
Total	****	10.86%	10.37%
<u>Tax Rates</u>			
Income	****	40.20%	39.70%
Ad Valorem	****	--	1.46%

1/ Per Confidential Attachment A to USWC response to APA Data Request 05-005 and 05-006, except for Ad Valorem per USWC electronic file AZRDCN20002958.xls, Tab WINPC3 ACF Outputs.

2/ Per Supplemental Exhibit GAR-S2 for Capital Costs and per Supplemental Exhibit GAR-S3 for Income Tax Rate. Ad Valorem rate not specifically identified in Supplemental Exhibits of Mr. Redding.

3/ Per Commission Decision No. 60635 (pgs. 8 and 14) except for Ad Valorem per USWC's BPAL cost study in prior PAL case.

**Exhibit (MJL-2)
Schedule 3D**

**ILLUSTRATION OF APA PROPOSED ACF DETERMINATIONS
PER \$1,000 OF BURIED METAL CABLE INVESTMENT (FRC 45C)**

Year	(1) Required Cash Receipts	(2) Before Tax Cash Expenses 1/	(3) Tax Depreciation 2/	(4) Taxable Income (1) - (2) - (3)	(5) Income Taxes (4) x 39.7%	(6) Total Net Cash Flow 4/ (1) - (2) - (5)	(7) Debt Retirement 5/	(8) Equity Cash Flow (6) - (7)	(9) Equity Present Value Factor 6/	(10) Present Value Equity Cash Flow Annual		(11) Accumulated
										(8) / (9)	(8) / (9)	
2000	\$172.23	\$83.55	\$50.00	\$38.68	\$15.36	\$73.32	\$19.15	\$54.17	1.06		\$51.10	\$51.10
2001	\$176.33	\$82.20	\$95.00	(\$0.87)	(\$0.34)	\$94.48	\$19.15	\$75.33	1.19		\$63.21	\$114.31
2002	\$180.53	\$80.84	\$85.50	\$14.19	\$5.63	\$94.06	\$19.15	\$74.91	1.34		\$55.92	\$170.24
2003	\$184.83	\$79.48	\$77.00	\$28.34	\$11.25	\$94.09	\$19.15	\$74.94	1.51		\$49.78	\$220.01
2004	\$189.22	\$78.12	\$69.30	\$41.80	\$16.59	\$94.51	\$19.15	\$75.36	1.69		\$44.53	\$264.54
2005	\$193.73	\$76.77	\$62.30	\$54.66	\$21.70	\$95.26	\$19.15	\$76.11	1.90		\$40.02	\$304.56
2006	\$198.34	\$75.41	\$59.00	\$63.93	\$25.38	\$97.55	\$19.15	\$78.40	2.14		\$36.67	\$341.23
2007	\$203.06	\$74.05	\$59.00	\$70.01	\$27.79	\$101.21	\$19.15	\$82.06	2.40		\$34.15	\$375.38
2008	\$207.89	\$72.69	\$59.10	\$76.10	\$30.21	\$104.99	\$19.15	\$85.84	2.70		\$31.78	\$407.17
2009	\$212.84	\$71.34	\$59.00	\$82.50	\$32.75	\$108.75	\$19.15	\$89.60	3.04		\$29.51	\$436.68
2010	\$217.90	\$69.98	\$59.10	\$88.83	\$35.26	\$112.66	\$19.15	\$93.51	3.41		\$27.40	\$464.08
2011	\$223.09	\$68.62	\$59.00	\$95.47	\$37.90	\$116.57	\$19.15	\$97.42	3.84		\$25.40	\$489.48
2012	\$228.40	\$67.26	\$59.10	\$102.04	\$40.51	\$120.63	\$19.15	\$101.48	4.31		\$23.54	\$513.02
2013	\$233.84	\$65.90	\$59.00	\$108.93	\$43.25	\$124.69	\$19.15	\$105.54	4.85		\$21.78	\$534.80
2014	\$239.40	\$64.55	\$59.10	\$115.76	\$45.95	\$128.90	\$19.15	\$109.75	5.45		\$20.15	\$554.95
2015	\$245.10	\$63.19	\$29.50	\$152.41	\$60.51	\$121.40	\$19.15	\$102.25	6.12		\$16.70	\$571.66
2016	\$250.93	\$61.83	\$0.00	\$189.10	\$75.07	\$114.03	\$19.15	\$94.88	6.88		\$13.79	\$585.45
2017	\$256.91	\$60.47	\$0.00	\$196.43	\$77.98	\$118.45	\$19.15	\$99.30	7.73		\$12.84	\$598.29
2018	\$263.02	\$59.12	\$0.00	\$203.90	\$80.95	\$122.95	\$19.15	\$103.80	8.69		\$11.94	\$610.23
2019	\$269.28	\$127.76	\$0.00	\$141.52	\$56.18	\$85.34	\$19.15	\$66.19	9.77		\$6.77	\$617.00

"CORRECT" YEAR 2000 ACF = (\$172.23/\$1,000.00) = 17.22%

- 1/ Escalated levels (at 2.38%) of annual cash flows needed to produce the results in Column (11) at the end of year 19 for this 20-year service life per Schedule 3B; i.e. the accumulated present value of the annual equity cashflows, when discounted at the equity cost of 12.40% per Schedule 3C to the beginning of the year 2000, equals the 61.70% equity financed portion per Schedule 3B of the original \$1,000 investment made at the beginning of the year 2000.
- 2/ Includes annual interest expense of 7.09% per Schedule 3C times the outstanding (unretired) balance of the 38.30% debt financed portion per Schedule 3C of the original \$1,000 investment, ad valorem expense of 0.0000% per Schedule 3C times \$1,000, maintenance expense of 0.0000% per Schedule 3D times \$1,000, and for only the year 2019, net salvage of -7% per Schedule 3B times the original investment of \$1,000.
- 3/ Per allowed rates for income tax purposes applicable to 15-year property under the Modified Accelerated Cost Recovery System (MACRS).
- 4/ Combined state and federal income tax rate per Schedule 3C.
- 5/ Debt financed portion (38.30%) per Schedule 3C of the original \$1,000 investment ratably retired over 20 years per Schedule 3B.
- 6/ Discount factor using mid-year convention, calculated as $(1 + 12.40\%)^{t-0.5}$, where $t = 1$ for the year 2000 to $t = 20$ for the year 2019.

**COMPARISON OF USWC PROPOSED AND APA PROPOSED
COST STUDY ECONOMIC/FINANCIAL PARAMETERS
MAINTENANCE FACTORS**

Plant & Equipment Description	Field Reporting Code (FRC)	(1) USWC Proposed <u>1/</u>	(2) APA Proposed <u>2/</u>
Poles	1C	****	****
Aerial Metal Cable	52C	****	****
Aerial Wire	3C	****	****
Conduit	4C	****	****
UG Metal Cable	5C	****	****
Buried Metal Cable	45C	****	****
Building Cable	62C	****	**** a/
UG Non-Metal Cable	85C	****	****
Operator Systems	117C	****	**** a/
Circuit Equipment	257C	****	****
Subscriber Pair Gain	257CS	****	****
Circuit Equipment - Other	357C	****	****
Circuit - Other (SONET)	357CS	****	****
General Purpose Computers	361C	****	**** a/
Digital Switching Equip.	377C	****	****
Buried Non-Metal Cable	845C	****	****
Building Non-Metal Cable	862C	****	**** a/
Building	110C	****	****
Land	20C	****	****
Buried Drop	35C	****	****
Aerial Drop	42C	****	****

1/ Per USWC electronic file AZRDCN20002958.xls, Tab WINPC3 ACF Outputs.

2/ Calculated as 85% (per Commission Decision No. 60635, p. 14) of maintenance factors contained in USWC's BPAL cost study in prior PAL case.

Note a/ means ****.

COMPARISON OF USWC PROPOSED AND APA PROPOSED "INITIAL" STEP ARIZONA TARIFFED CHARGES
STATEWIDE FLAT AND MEASURED RATE BPAL SERVICE
(EXCLUDES FEDERAL EUCLC AND PICC CHARGES)

Tariff Elements	(1)		(2)		(3)		(4)		(5)		(6)	
	Flat Rate BPAL Service		Measured Rate BPAL Service									
	USWC	Proposed 1/	APA	Proposed	Percent Change	USWC	Proposed 1/	APA	Proposed	Percent Change	USWC	Proposed 1/
Recurring Monthly Rates												
Access Line (Per Line)												
Unlimited Calls & Minutes Allowance	\$42.31		\$21.80	2/	-48.5%	N/A		N/A			N/A	
With 575 Calls Allowance	N/A		N/A		N/A	\$38.51		\$18.00	7/	-53.3%	N/A	
With No Calls Allowance	N/A		N/A		N/A	\$17.16		\$8.00	8/	-53.3%	N/A	
Calls Usage (Per Call) a/	N/A		N/A		N/A	8.0¢		3.74¢	8/	-53.3%		
Minutes Usage (Per MOU Per Call) b/												
Initial	N/A		N/A		N/A	5.0¢		2.34¢	8/	-53.3%		
Additional	N/A		N/A		N/A	1.5¢		0.70¢	8/	-53.3%		
Fraud Protection	\$2.50		\$1.00	3/	-60.0%	\$2.50		\$1.00	3/	-60.0%		
Non-Recurring Rates												
Access Line												
Initial	\$56.00		\$36.00	4/	-35.7%	\$56.00		\$36.00	4/	-35.7%		
Other	\$27.50		\$17.50	5/	-36.4%	\$27.50		\$17.50	5/	-36.4%		
Fraud Protection c/	\$15.00		\$3.00	6/	-80.0%	\$15.00		\$3.00	6/	-80.0%		

a/ Applies to calls beyond 575 per month and to Calls Usage option under No Calls Allowance.

b/ Applies to Minutes Usage Option under No Calls Allowance.

c/ Applicable only when installed subsequent to payphone connection.

**COMPARISON OF USWC PROPOSED AND APA PROPOSED ARIZONA
TARIFFED CHARGES STATEWIDE FLAT AND MEASURED RATE BPAL SERVICES
(FOOTNOTES)**

- 1/ Per current USWC filing. See also its Arizona Exchange and Network Services Tariff, Section 5.5, Public Communications Service-Coin and Coinless Public Access Line Service.
- 2/ Per Schedule 1, Page 1 of 3, APA Proposed, Column (6).
- 3/ Based on USWC CustomNet Recurring Cost Study (Study ID 2917) Investments for Digital Switching, Buildings and Land; APA Proposed ACFs per Schedule 3; and, a 15% Common Cost Factor. Calculated as follows:

	<u>Digital Sw.</u>	<u>Building</u>	<u>Land</u>	<u>Total</u>
(a) Investment Per Call	\$****	\$****	\$****	
(b) APA Proposed ACF	23.92%	17.16%	19.82%	
(c) Monthly Cost & Common	\$****	\$****	\$****	\$****
Per Call: $[(a) \times (b)] / 12 \times 1.15$				
(d) Monthly Flat Rate BPAL				
Calls <u>i/</u>	--	--	--	****
(e) Monthly Cost & Common:				
(c) \times (d) $\times 2$ <u>ii/</u>	--	--	--	\$****
(f) APA Proposed Monthly Charge:				\$1.00
<u>i/</u> Per USWC file AZRBCN20002958.xls, Tab Inputs.				
<u>ii/</u> Reflects provision for both outgoing and incoming calls.				

- 4/ Based on USWC Nonrecurring Cost Detail Summary (Economic), Study Name: Residence Access Line and Study Name: Business Access Line, NRC Version: 2.09. Calculated as follows:

	<u>Residential</u>	<u>Business</u>	<u>Average</u>
(a) Total Direct Cost	\$****	\$****	\$****
(b) Direct & Common Cost: (a) $\times 1.15$	--	--	\$****
(c) APA Proposed Charge	--	--	\$36.00

5/ Based on USWC Proposed and APA Proposed initial charge. Calculated as follows:

(a) USWC Proposed Initial Charge	\$56.00
(b) USWC Proposed Other Charge	\$27.50
(c) APA Proposed Initial Charge	\$36.00
(d) APA Proposed Other Charge: $[(b) / (a)] \times (c) - \0.18	\$17.50

- 6/ Based on USWC Nonrecurring Cost Detail Summary (Economic), Study Name: Residence Screening Restriction Services and Study Name: Business Screening Restriction Services, NRC Version: 2.09, calculated as follows:

	<u>Residential</u>	<u>Business</u>	<u>Average</u>
(a) Total Direct Cost	\$****	\$****	\$****
(b) Direct & Common Cost: (a) $\times 1.15$	--	--	\$****
(c) APA Proposed Charge	--	--	\$3.00

- 7/ Determined based on maintaining the same absolute relationship incorporated in USWC Proposed Flat Rate and Measured Rate BPAL (With Call Allowance). Calculated as follows:
- $$\$21.80 - [(\$42.31) - (\$38.51)] = \$18.00$$

- 8/ Determined based on maintaining relationships in tariff structure; i.e., the 53.3% decrease resulting from 7/ applied to each rate element.

COMPARISON OF USWC PROPOSED AND APA PROPOSED "SECOND" SET ARIZONA TARIFFED CHARGES
STATEWIDE FLAT AND MEASURED RATE BPAL SERVICE
(EXCLUDES FEDERAL EUCLC AND PICC CHARGES)

Tariff Elements	(1)		(2)		(3)		(4)		(5)		(6)	
	Flat Rate BPAL Service		Measured Rate BPAL Service									
	USWC	Proposed 1/	APA	Proposed	Percent Change	USWC	Proposed 1/	APA	Proposed	Percent Change	USWC	Proposed 1/
Recurring Monthly Rates												
Access Line (Per Line)												
Unlimited Calls & Minutes Allowance	\$42.31		\$13.09 2/		-69.1%	N/A		N/A		N/A		N/A
With 575 Calls Allowance	N/A		N/A		N/A	\$38.51		\$9.29 7/		-75.9%		
With No Calls Allowance	N/A		N/A		N/A	\$17.16		\$4.14 8/		-75.9%		
Calls Usage (Per Call) a/	N/A		N/A		N/A	8.0¢		1.93¢ 8/		-75.9%		
Minutes Usage (Per MOU Per Call) b/												
Initial	N/A		N/A		N/A	5.0¢		1.21¢ 8/		-75.9%		
Additional	N/A		N/A		N/A	1.5¢		0.36¢ 8/		-75.9%		
Fraud Protection	\$2.50		\$1.00 3/		-60.0%	\$2.50		\$1.00 3/		-60.0%		
Non-Recurring Rates												
Access Line												
Initial	\$56.00		\$36.00 4/		-35.7%	\$56.00		\$36.00 4/		-35.7%		
Other	\$27.50		\$17.50 5/		-36.4%	\$27.50		\$17.50 5/		-36.4%		
Fraud Protection c/	\$15.00		\$3.00 6/		-80.0%	\$15.00		\$3.00 6/		-80.0%		

a/ Applies to calls beyond 575 per month and to Calls Usage option under No Calls Allowance.

b/ Applies to Minutes Usage Option under No Calls Allowance.

c/ Applicable only when installed subsequent to payphone connection.

**COMPARISON OF USWC PROPOSED AND APA PROPOSED "SECOND" SET ARIZONA
TARIFFED CHARGES STATEWIDE FLAT AND MEASURED RATE BPAL SERVICES
(FOOTNOTES)**

- 1/ Per current USWC filing. See also its Arizona Exchange and Network Services Tariff, Section 5.5, Public Communications Service-Coin and Coinless Public Access Line Service.
- 2/ Per Schedule 1, Page 1 of 3, USWC Restated, Column (6) less \$11.61.
- 3/ Based on USWC CustomNet Recurring Cost Study (Study ID 2917) Investments for Digital Switching, Buildings and Land; APA Proposed ACFs per Schedule 3; and, a 15% Common Cost Factor. Calculated as follows:

	<u>Digital Sw.</u>	<u>Building</u>	<u>Land</u>	<u>Total</u>
(a) Investment Per Call	\$****	\$****	\$****	
(b) APA Proposed ACF	23.92%	17.16%	19.82%	
(c) Monthly Cost & Common	\$****	\$****	\$****	\$****
Per Call: $[(a) \times (b)] / 12 \times 1.15$				
(d) Monthly Flat Rate BPAL				
Calls <u>i/</u>	--	--	--	****
(e) Monthly Cost & Common:				
(c) \times (d) $\times 2$ <u>ii/</u>	--	--	--	\$****
(f) APA Proposed Monthly Charge:				\$1.00

i/ Per USWC file AZRBCN20002958.xls, Tab Inputs.

ii/ Reflects provision for both outgoing and incoming calls.

- 4/ Based on USWC Nonrecurring Cost Detail Summary (Economic), Study Name: Residence Access Line and Study Name: Business Access Line, NRC Version: 2.09. Calculated as follows:

	<u>Residential</u>	<u>Business</u>	<u>Average</u>
(a) Total Direct Cost	\$****	\$****	\$****
(b) Direct & Common Cost: $(a) \times 1.15$	--	--	\$****
(c) APA Proposed Charge	--	--	\$36.00

- 5/ Based on USWC Proposed and APA Proposed initial charge. Calculated as follows:

(a) USWC Proposed Initial Charge	\$56.00
(b) USWC Proposed Other Charge	\$27.50
(c) APA Proposed Initial Charge	\$36.00
(d) APA Proposed Other Charge: $[(b) / (a)] \times (c) - \0.18	\$17.50

- 6/ Based on USWC Nonrecurring Cost Detail Summary (Economic), Study Name: Residence Screening Restriction Services and Study Name: Business Screening Restriction Services, NRC Version: 2.09, calculated as follows:

	<u>Residential</u>	<u>Business</u>	<u>Average</u>
(a) Total Direct Cost	\$****	\$****	\$****
(b) Direct & Common Cost: $(a) \times 1.15$	--	--	\$****
(c) APA Proposed Charge	--	--	\$3.00

- 7/ Determined based on maintaining the same absolute relationship incorporated in USWC Proposed Flat Rate and Measured Rate BPAL (With Call Allowance). Calculated as follows:
 $\$13.09 - [(\$42.31) - (\$38.51)] = \9.29

- 8/ Determined based on maintaining relationships in tariff structure; i.e., the 75.9% decrease resulting from 7/ applied to each rate element.